

Fantastic Journeys

Line Master 1 (Assessment Master)

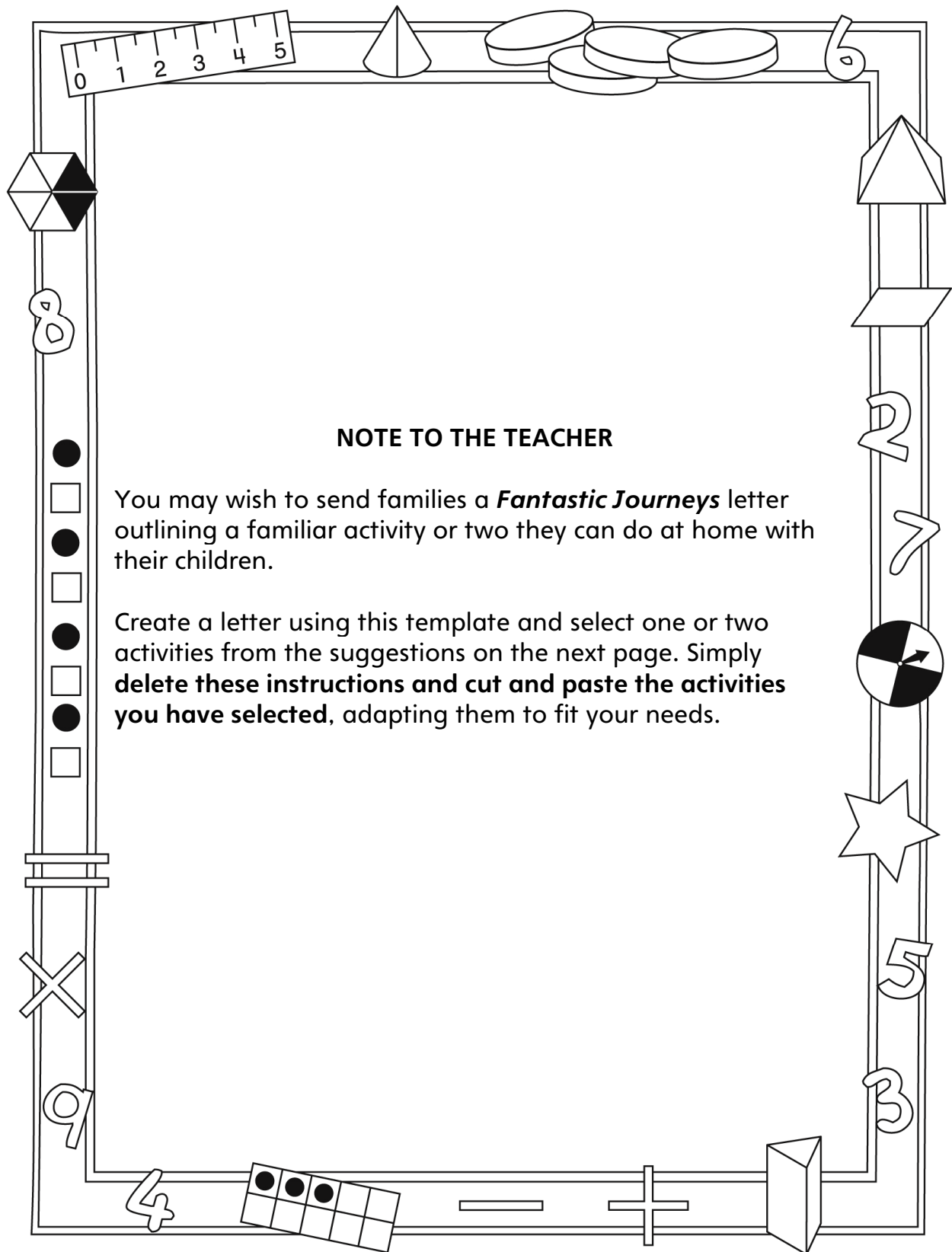
Name: _____

Estimate Quantities to 1000	Not observed	Sometimes	Consistently
Composes and decomposes numbers to 1000			
Uses relevant benchmarks to estimate and compare quantity			
Rounds numbers to multiples of 10			
Skip-counts groups to find how many			
Compare and Order Numbers and Quantities to 1000			
Compares quantities to 1000			
Orders 3 or more numbers			
Finds how many more/less one quantity is compared to another			
Identifies 10 (100) more/less than a given number			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

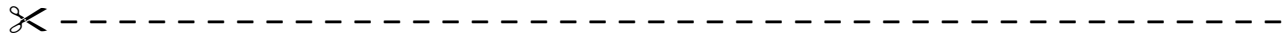
You may wish to send families a *Fantastic Journeys* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

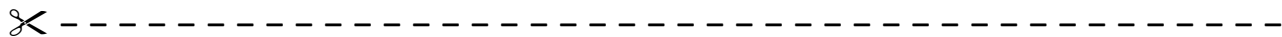
Connecting Home and School Line Master 2-2

Dear Family:

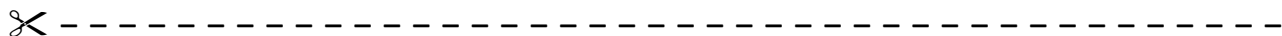
We have been working on *Fantastic Journeys*, which focuses on estimating quantities to 1000, and comparing and ordering numbers and quantities to 1000. Try this activity at home with your child.



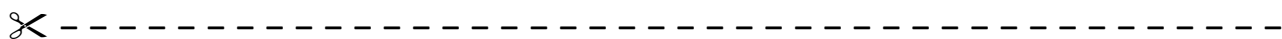
Reading the Story: As you read the story, enjoy discussing how many animals you estimate are in each migration picture. Encourage your child to share his or her strategy for estimating. You might select other migration pictures online to estimate. If you find images you think we can use for estimating practice, please print and send them in (or email) by (date).



Amazing and True Facts: *Fantastic Journeys* presents some remarkable facts under the heading “Amazing and True!” Discuss these and, when possible, find measurements in the family that you can compare to them (butterfly wing flapping, elephant heights, Arctic tern wingspan). For example, estimate, measure, and compare: the number of times family members can flap their arms in 1 minute; your heights in centimetres; your arm spans.



Make the Greater Number: Together, make small cards with the numbers 0 to 9. Here are the rules for a game we played in class. Players try to make the greater number. You select 4 cards one at a time. Each time, you both choose where to record the number to make your 3-digit number. One of the cards you can choose to discard and not to use at all. Shuffle and make a pile of cards. Count to 3 and turn over a card. Record it as a 100, 10, 1, or discard. The player with the greater number scores a point.



Sincerely,

What's the Order?

Line Master 3-1

Name: _____

1. What are the numbers you are working with?

--	--	--

2. What are the 3 numbers you made?

--	--	--

3. Write your 3 numbers in order from least to greatest.

--	--	--

4. Which of these numbers are closest together? Use numbers, drawings, and/or words to explain your work.

What's the Order?

Line Master 3-2

Name: _____

5. Fill in the table to show how close.

My 3-Digit Number	How close is this number to 250?	How close is this number to 500?

6. Write your numbers in order in the boxes with solid lines. What numbers can you add to your order? Write them in the dashed boxes.

--	--	--	--	--	--

About How Many?

Line Master 4

Name: _____

1. What is in your container?	2. About how many do you see?	3. How many do you estimate are in the container?
-------------------------------	-------------------------------	---

4. Explain your estimate. Use drawings, numbers, and words.

5. Count to find how many. How many are in the container?	6. Was your estimate higher than or lower than the count?
---	---

7. How close was your estimate? Explain.

3-Digit Numeral Cards

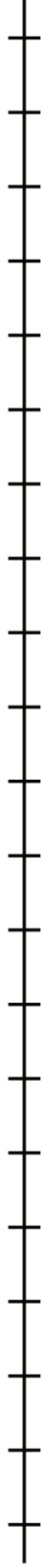
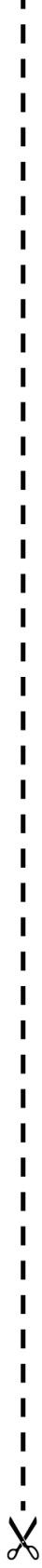
Line Master 5

150	200	250
500	750	457
475	574	547
754	745	350
525	675	825

0	1	2
3	4	5
6	7	8
9		

Number Lines

Line Master 7



Make the Greater Number

Line Master 8

Name: _____

How To Play:

1. To start a round, count to 3, and then you and your partner choose a number card.
2. Look at the number on your card and **think!**
 - Do I want to discard this number?
 - Do I want to use this number to make my 3-digit number?
3. Record the number on your card.
4. Continue until you have both had 4 turns.
5. Compare the 3-digit numbers you made. Who made the greater number?
If it was you, circle your number and score 1 point!

Round	My Number	_____’s Number
1	_____ discard _____	_____ discard _____
2	_____ discard _____	_____ discard _____
3	_____ discard _____	_____ discard _____
4	_____ discard _____	_____ discard _____

Write About?

Line Master 9

Name: _____

What is your 3-digit number?

is greater than _____	looks like this	is 100 greater than _____
is between _____ and _____		is 100 less than _____
is 50 greater than _____	is less than _____	is 50 less than _____
is _____ away from 500	is closer to _____ than to _____	

Write sentences about your number using the phrases above.

1. _____

2. _____

3. _____

4. _____

5. _____

Solve the Problem

Line Master 10



Suppose that every day we use 1 sheet of paper for each child in our class.
How many do you think we would use in 1 month?

Write an estimate.

Write a plan that shows how you would try to find an actual number.



Write an estimate for the number of books in your classroom.

Write an estimate for the number of books in the school.

Explain how you thought of both estimates.



Suppose 5 math groups estimated the number of students in the school.
Here are their estimates.

468 595 620 525 450

They counted 557 students.

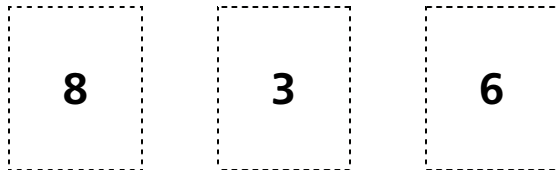
Which estimate is the closest to the actual number?

Which estimate is the farthest from the actual number?

Use drawings, numbers, and words to explain your thinking.



What 3-digit numbers can you make with these cards?



Record them in order from least to greatest.



Here are 4 numbers. 458 836 530 699

Which numbers are greater than 635?

Which numbers are less than 503?

Record a number that is greater than all of these numbers.

Record a number that is less than all of these numbers.



Hundred Chart

Line Master 11

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Finding Buster

Line Master 1 (Assessment Master)

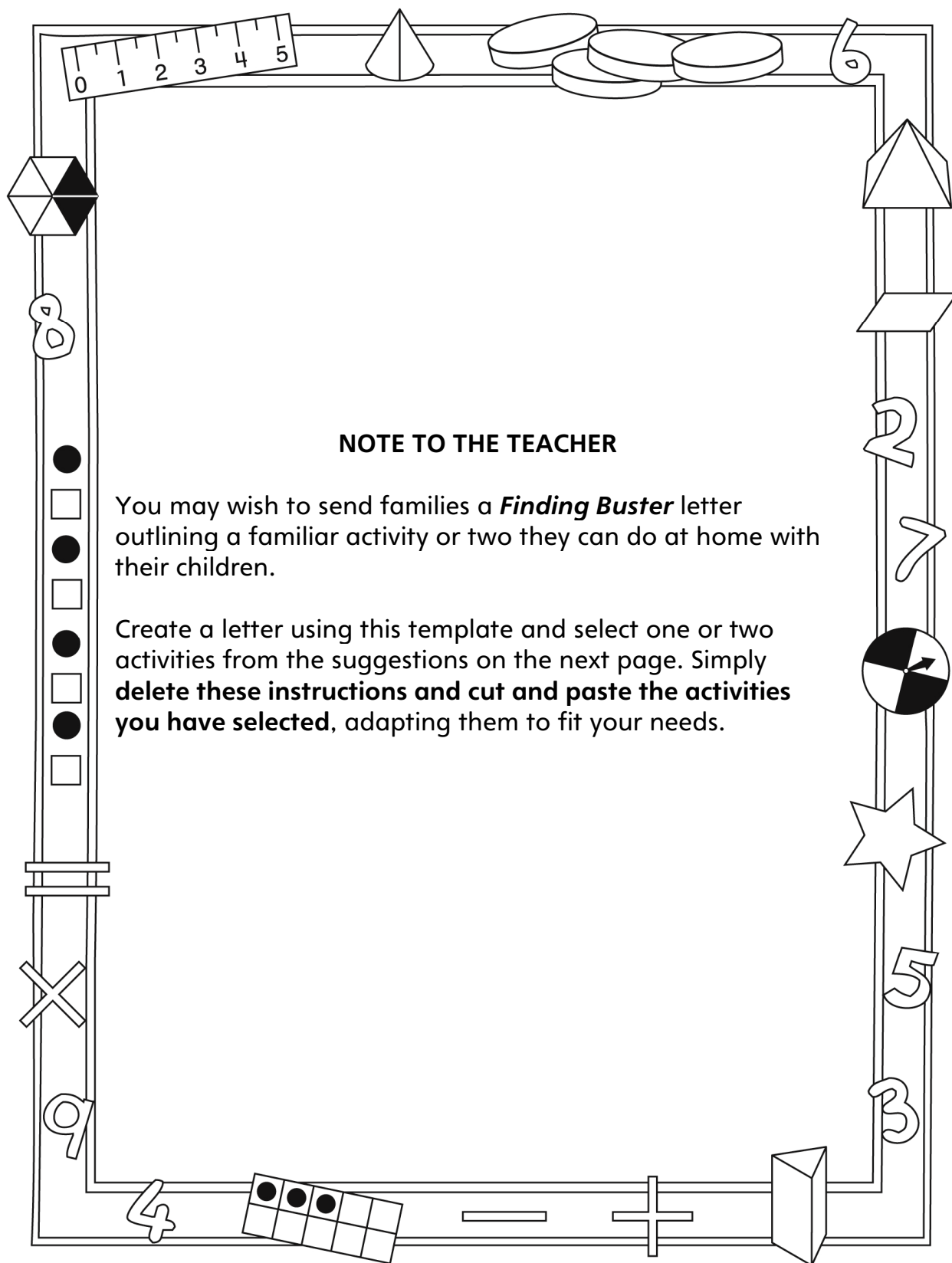
Name: _____

Compose to 1000 Based on Place Value	Not observed	Sometimes	Consistently
Writes, reads, composes, and decomposes 3-digit numbers as hundreds, tens, and ones			
Determines 10 or 100 more/less than the given numbers			
Compare and Order Quantities and Numbers to 1000			
Compares quantities and numbers to 1000			
Estimates quantities and numbers to 1000			
Orders quantities and numbers to 1000			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

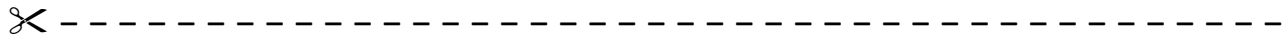
You may wish to send families a ***Finding Buster*** letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

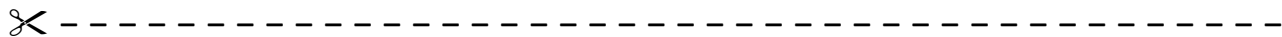
Connecting Home and School Line Master 2–2

Dear Family:

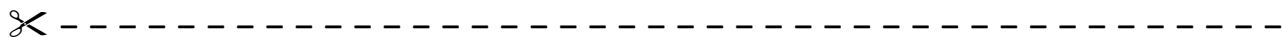
We have been working on ***Finding Buster***, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Quantities and numbers can be grouped by units or split into units.” Particular focus is placed on composing numbers to 1000. Try this activity at home with your child.



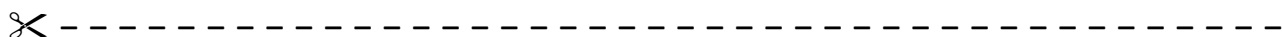
Reading the Story: As you read the story, enjoy estimating (guessing) how many items are in the scenes that show large collections. After you read, you might use collections of small objects such as buttons, coins, or beans to estimate and count numbers greater than 100. Grab large handfuls of the objects and spill them onto a surface. Estimate how many there are before grouping them into hundreds, tens, and ones on the inside back cover mat.



I Spy Numbers: Search the book for 3-digit numbers and list the ones you find. Take turns asking each other questions such as the following: **I spy a number that is 100 more than 400. Which number is it? I spy the number that is the greatest one on the list. What number is it?** Create new lists of 3-digit numbers by searching your home, newspaper, or books.



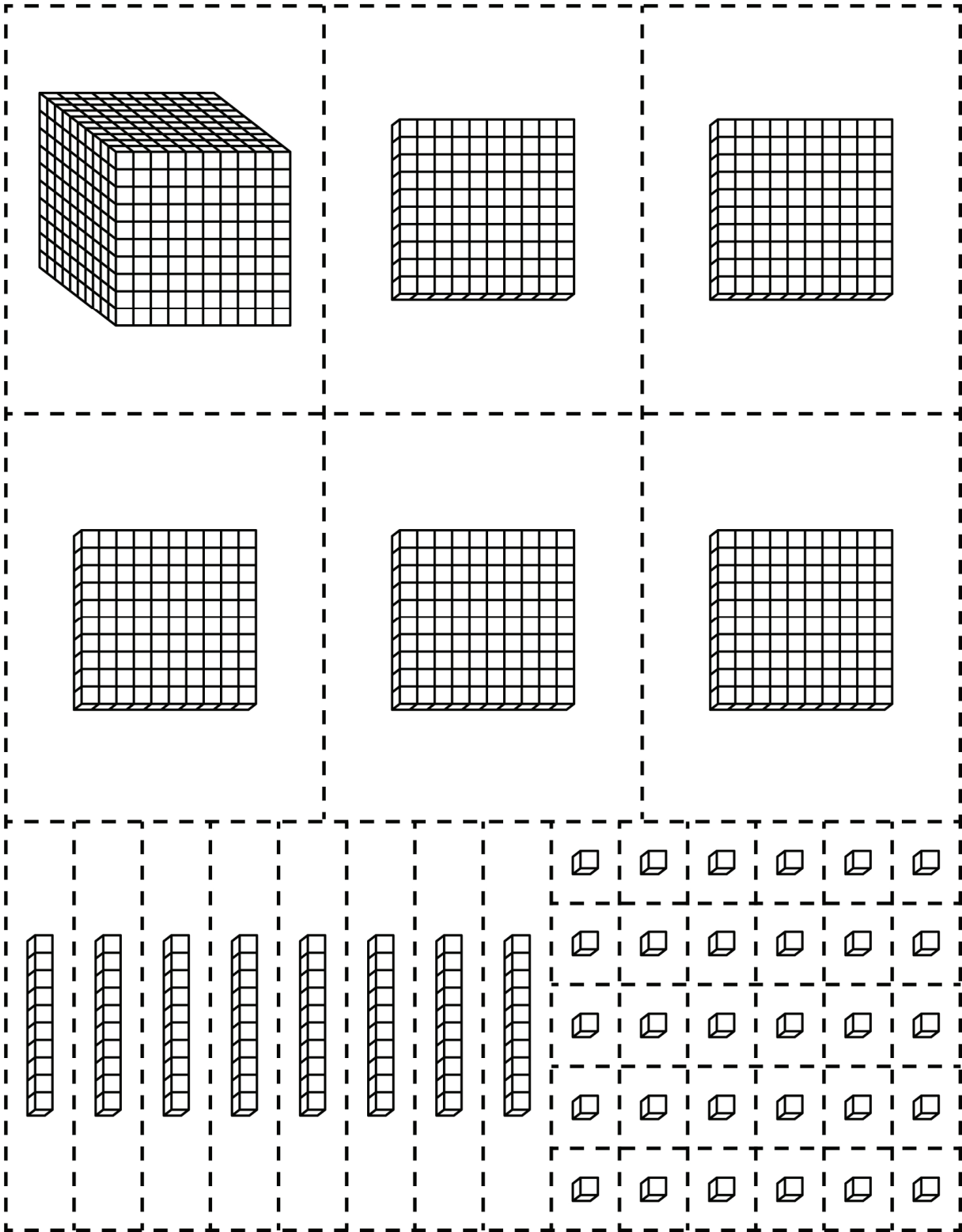
Make the Greatest or Least Number! Print the numbers 0–9 on 2 sets of separate cards, shuffle them, and place them face down. In turn, flip over 3 cards. Arrange the cards to make the greatest number you can. Then challenge the other to rearrange the same cards to make the least/smallest number possible. After several turns, shuffle the cards before continuing.



Sincerely,

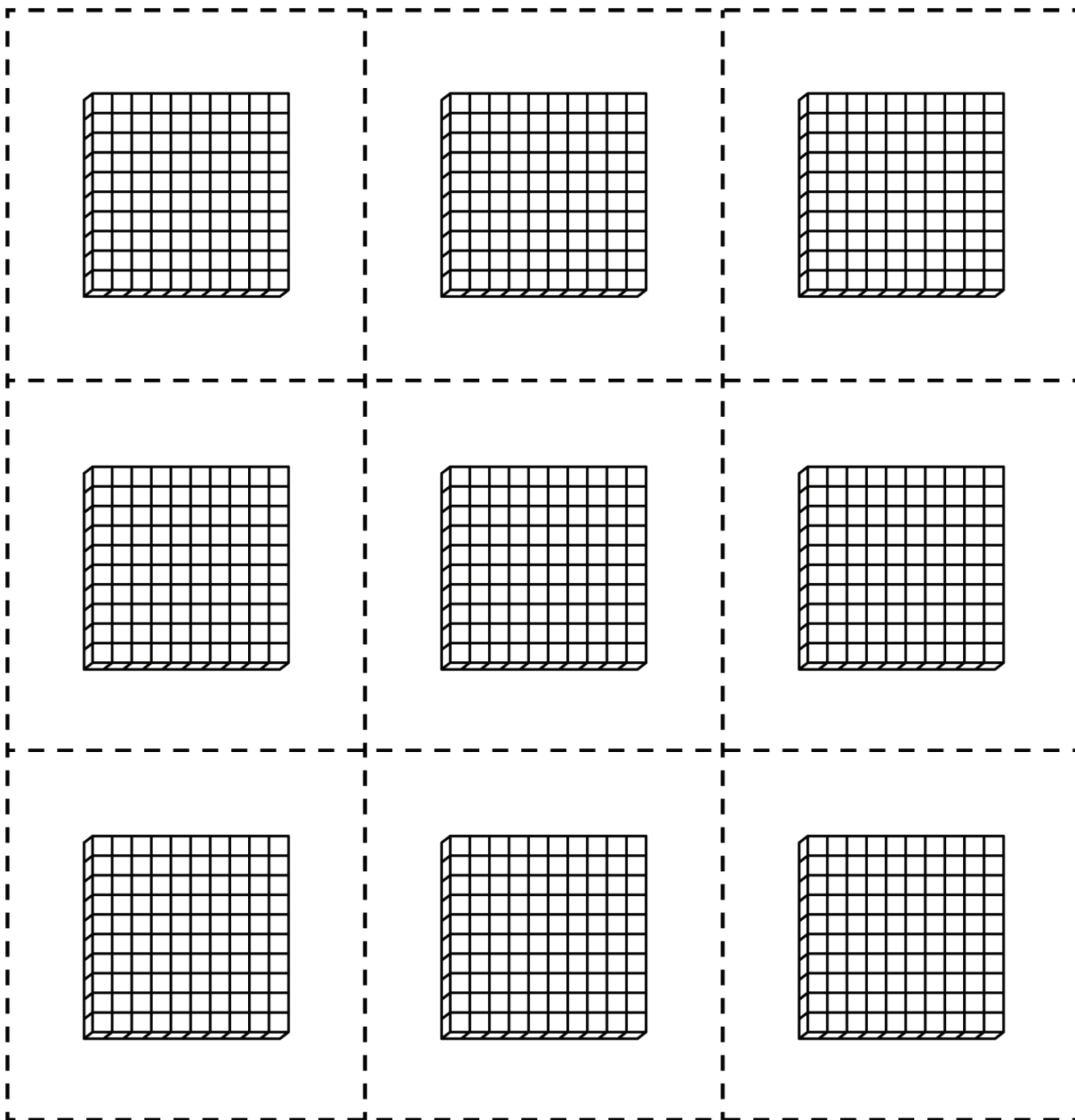
Base Ten Cutouts

Line Master 3-1



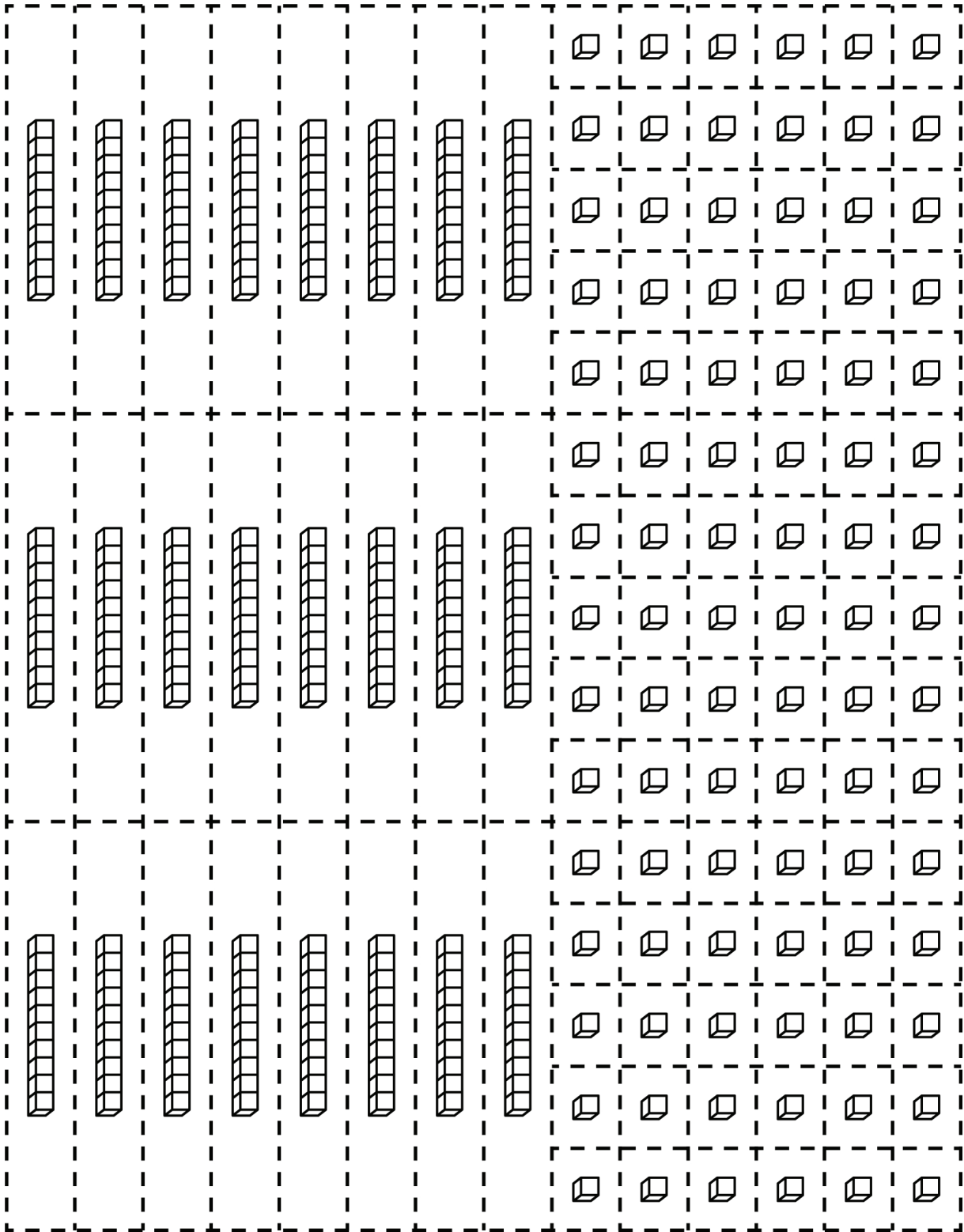
Base Ten Cutouts

Line Master 3-2



Base Ten Cutouts

Line Master 3-3



Hundred Charts

Line Master 4-1

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Hundred Charts

Line Master 4-2

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Hundred Charts

Line Master 4-3

201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300

Hundred Charts

Line Master 4-4

301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370
371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400

Hundred Charts

Line Master 4–5

401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500

Hundred Charts

Line Master 4–6

501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520
521	522	523	524	525	526	527	528	529	530
531	532	533	534	535	536	537	538	539	540
541	542	543	544	545	546	547	548	549	550
551	552	553	554	555	556	557	558	559	560
561	562	563	564	565	566	567	568	569	570
571	572	573	574	575	576	577	578	579	580
581	582	583	584	585	586	587	588	589	590
591	592	593	594	595	596	597	598	599	600

Hundred Charts

Line Master 4–7

601	602	603	604	605	606	607	608	609	610
611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630
631	632	633	634	635	636	637	638	639	640
641	642	643	644	645	646	647	648	649	650
651	652	653	654	655	656	657	658	659	660
661	662	663	664	665	666	667	668	669	670
671	672	673	674	675	676	677	678	679	680
681	682	683	684	685	686	687	688	689	690
691	692	693	694	695	696	697	698	699	700

Hundred Charts

Line Master 4–8

701	702	703	704	705	706	707	708	709	710
711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740
741	742	743	744	745	746	747	748	749	750
751	752	753	754	755	756	757	758	759	760
761	762	763	764	765	766	767	768	769	770
771	772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789	790
791	792	793	794	795	796	797	798	799	800

Hundred Charts

Line Master 4-9

801	802	803	804	805	806	807	808	809	810
811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830
831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850
851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870
871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890
891	892	893	894	895	896	897	898	899	900

Hundred Charts

Line Master 4–10

901	902	903	904	905	906	907	908	909	910
911	912	913	914	915	916	917	918	919	920
921	922	923	924	925	926	927	928	929	930
931	932	933	934	935	936	937	938	939	940
941	942	943	944	945	946	947	948	949	950
951	952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969	970
971	972	973	974	975	976	977	978	979	980
981	982	983	984	985	986	987	988	989	990
991	992	993	994	995	996	997	998	999	1000

Ordering Books

Line Master 5

Name: _____

least



greatest

We estimate...	We discovered...
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages
_____ _____ pages	_____ _____ pages

Ones	
Tens	
Hundreds	

Modelling Numbers

Line Master 7

Names: _____

I see _____ hundreds, _____ tens, and _____ ones.

I see _____ altogether.

I see _____ hundreds, _____ tens, and _____ ones.

I see _____ altogether.

I see _____ hundreds, _____ tens, and _____ ones.

I see _____ altogether.

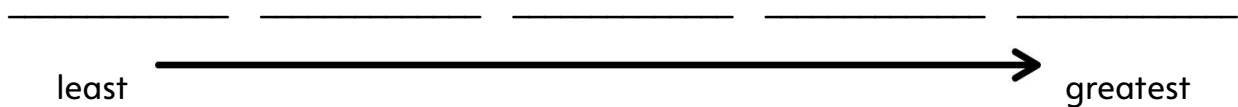
I see _____ hundreds, _____ tens, and _____ ones.

I see _____ altogether.

I see _____ hundreds, _____ tens, and _____ ones.

I see _____ altogether.

Order the numbers you both modelled.



Finding Buster Map

Line Master 8

Blank Hundred Chart

Line Master 9

Numbers Recording Sheet

Line Master 10

Hundreds	Tens	Ones

Number: _____

Hundreds	Tens	Ones

Number: _____

Hundreds	Tens	Ones

Number: _____

Hundreds	Tens	Ones

Number: _____

Hundreds	Tens	Ones

Number: _____

Hundreds	Tens	Ones

Number: _____

Riddle Recording Sheet

Line Master 11

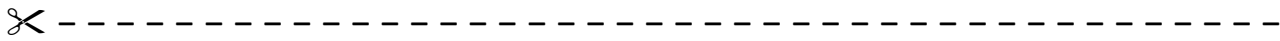
Name: _____

Write up to 5 clues to help others identify your mystery number. Use the following wordings to build your clues:

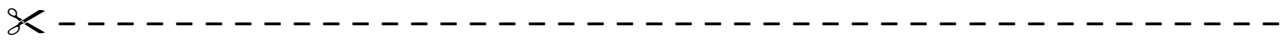
- greater than
- less than
- between ___ and ___
- closer to ___ than to ___
- 100 greater (less) than ___
- has ___ in the hundreds place and ___ in the ones place
- 50 more (less) than ___
- you say it when counting by ___

1.
2.
3.
4.
5.

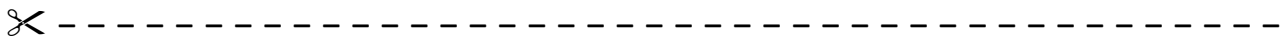
Guess my mystery number. _____



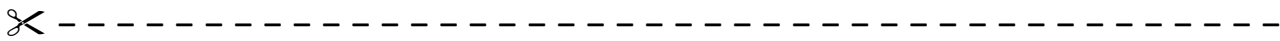
How many linking cubes do you think it would take to cover the book *Finding Buster*? _____
Cover the book, count, re-count, and record how many.



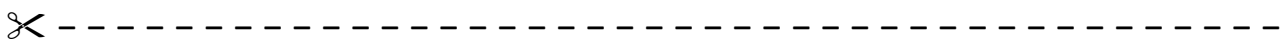
How many linking cubes do you think it would take to cover your desk? _____
Cover the desk, count, re-count, and record how many.



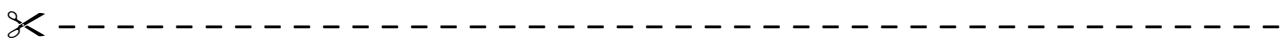
How many linking cubes do you think it would take to measure the length of the meeting carpet? _____
Line up the cubes, count, re-count, and record how many.



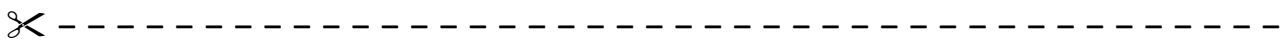
Find the largest 3-digit number you can in the room.
Record the number and where you found it.



Find the smallest 3-digit number you can in the room.
Record the number and where you found it.



How many groups of 10 are in 1000?
Record what and how you found out using pictures, words, and numbers.



How Numbers Work

Line Master 1 (Assessment Master)

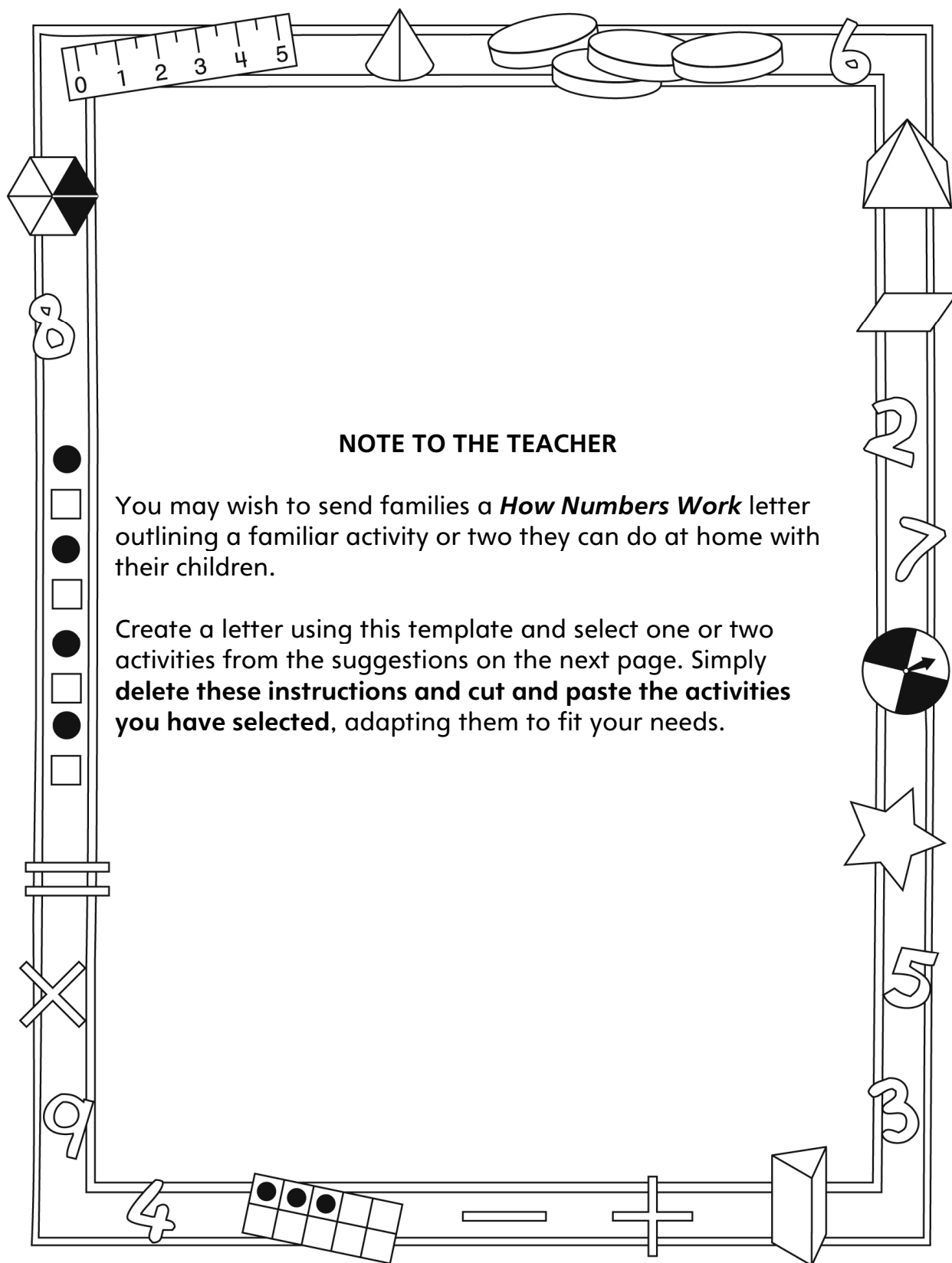
Name: _____

Compose and Decompose 3-digit Numbers	Not observed	Sometimes	Consistently
Identifies and represents the value of a digit in a number according to its position in the number			
Writes and reads 3-digit numbers as 100s, 10s, and 1s			
Represents and explains the relationship among 1, 10, 100, and 1000			
Groups quantities based on units of 10 (to 1000)			
Find and Use Number Patterns			
Identifies and describes numerical patterns			
Determines 10 or 100 more/less than a given number without counting			
Counts forward or back by 5s, 10s, 25s, and 100s to 1000			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

You may wish to send families a *How Numbers Work* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

Connecting Home and School Line Master 2–2

Dear Family:

We have been working on *How Numbers Work*, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Quantities and numbers can be grouped by units or split into units.” Particular focus is placed on composing and decomposing 3-digit numbers. Try this activity at home with your child.

✂ -----

Reading the Story: As you read the story, enjoy discussing the different number systems. We have answered many of the code breaker’s questions and your child can share responses with you. Together, create numbers in different systems. Your child can bring these numbers to class and take on the role of code breaker, offering the numbers to classmates to decipher. Please send them in by (date).

✂ -----

Numbers in Our World: The book *How Numbers Work* ends with a presentation of some of the many ways we use numbers. Be on the lookout together for numbers in the environment. Photograph interesting numbers found in your environment and/or collect numbers from print sources. Send them to class where we will sort, compare, and order them.

✂ -----

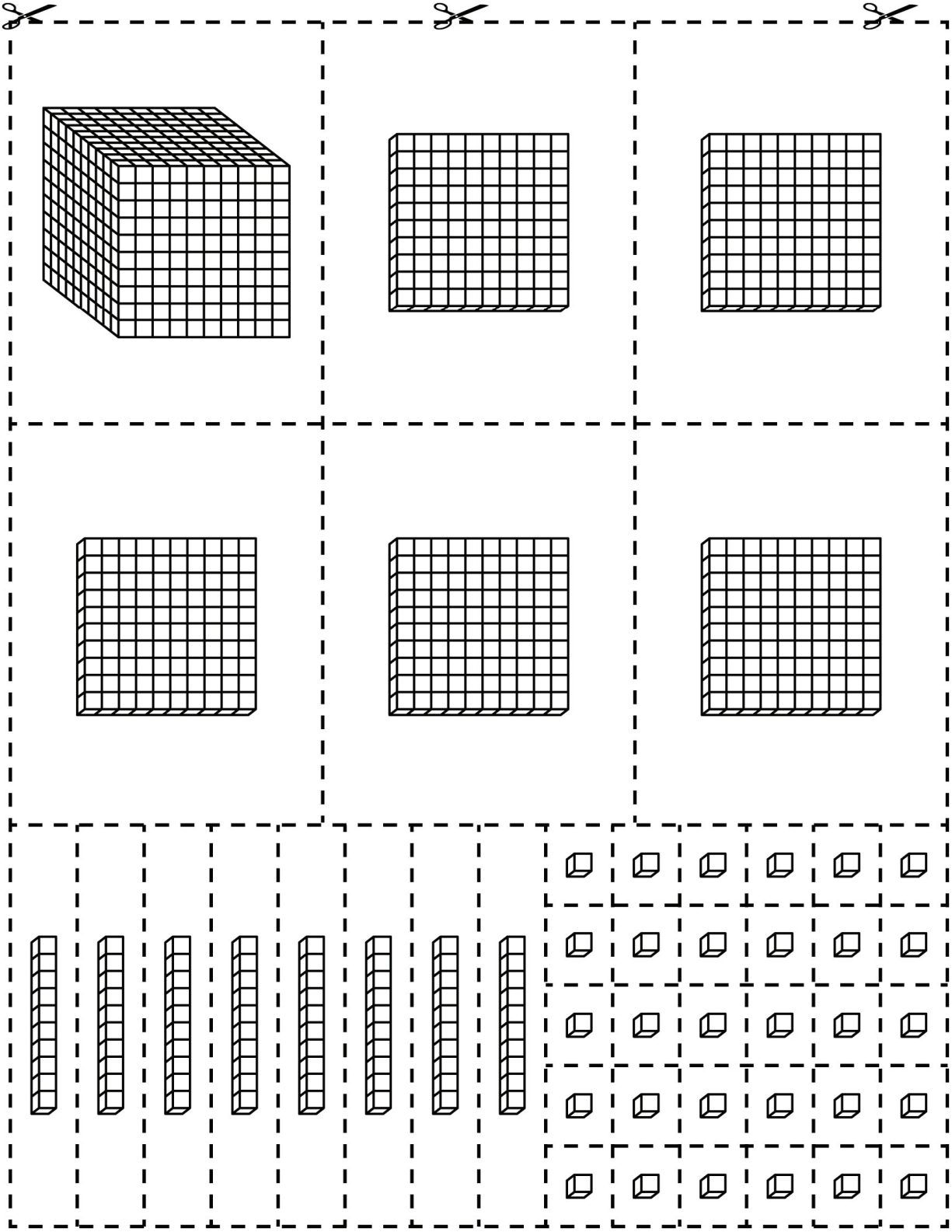
First to 1000: In this game, players practise adding 1, 10, and 100 to numbers as they try to get to 1000 first. Adding 1, 10, and 100 to numbers helps your child to see patterns in our number system. Together, choose a 2-digit number. On your turn, you can add 1, 10, or 100. Record as you go. The player who reaches exactly 1000 wins the round. You might then play starting at 1000 and subtract 1, 10, or 100 with the goal of reaching 0.

✂ -----

Sincerely,

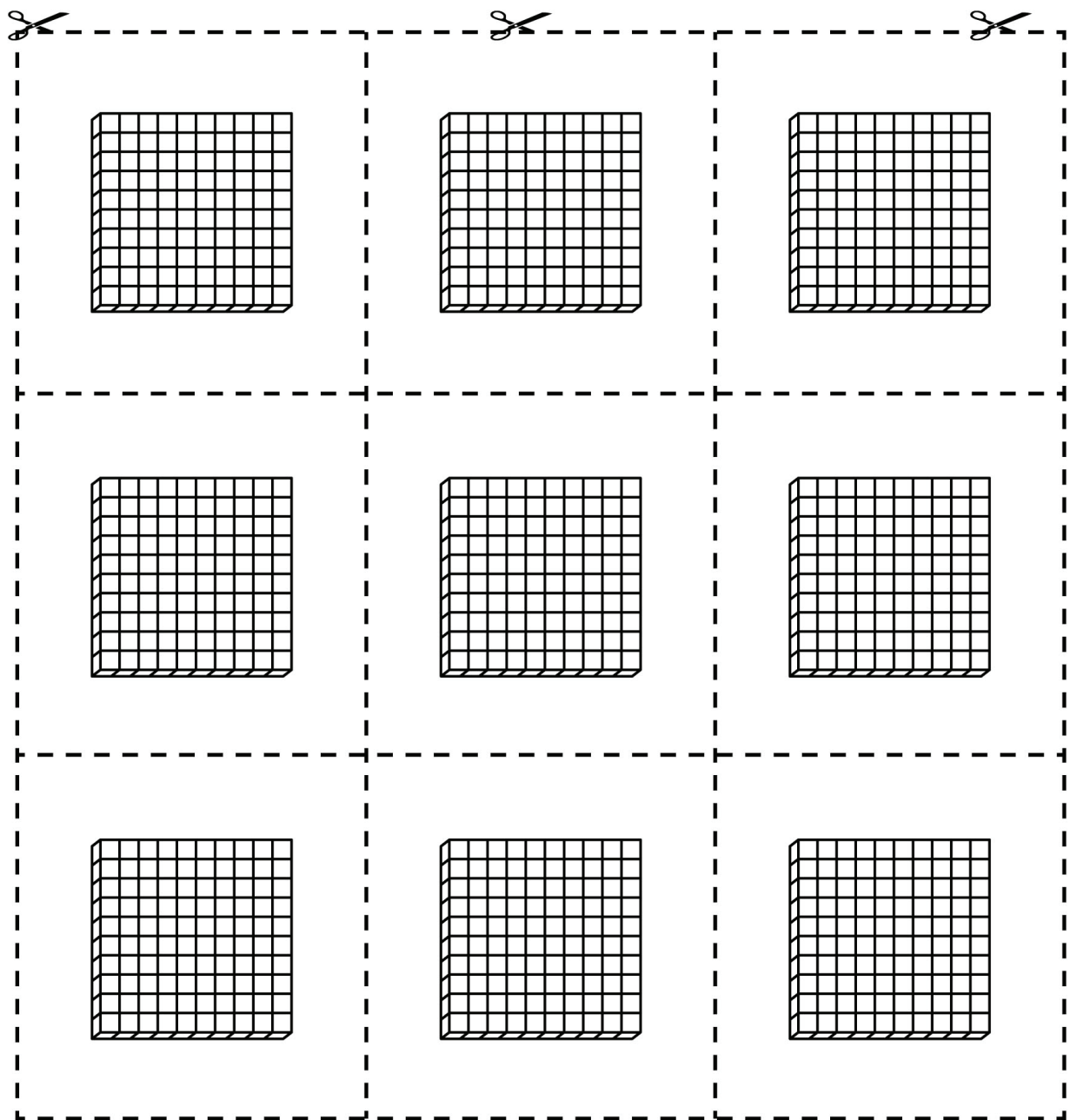
Base Ten Cutouts

Line Master 3-1



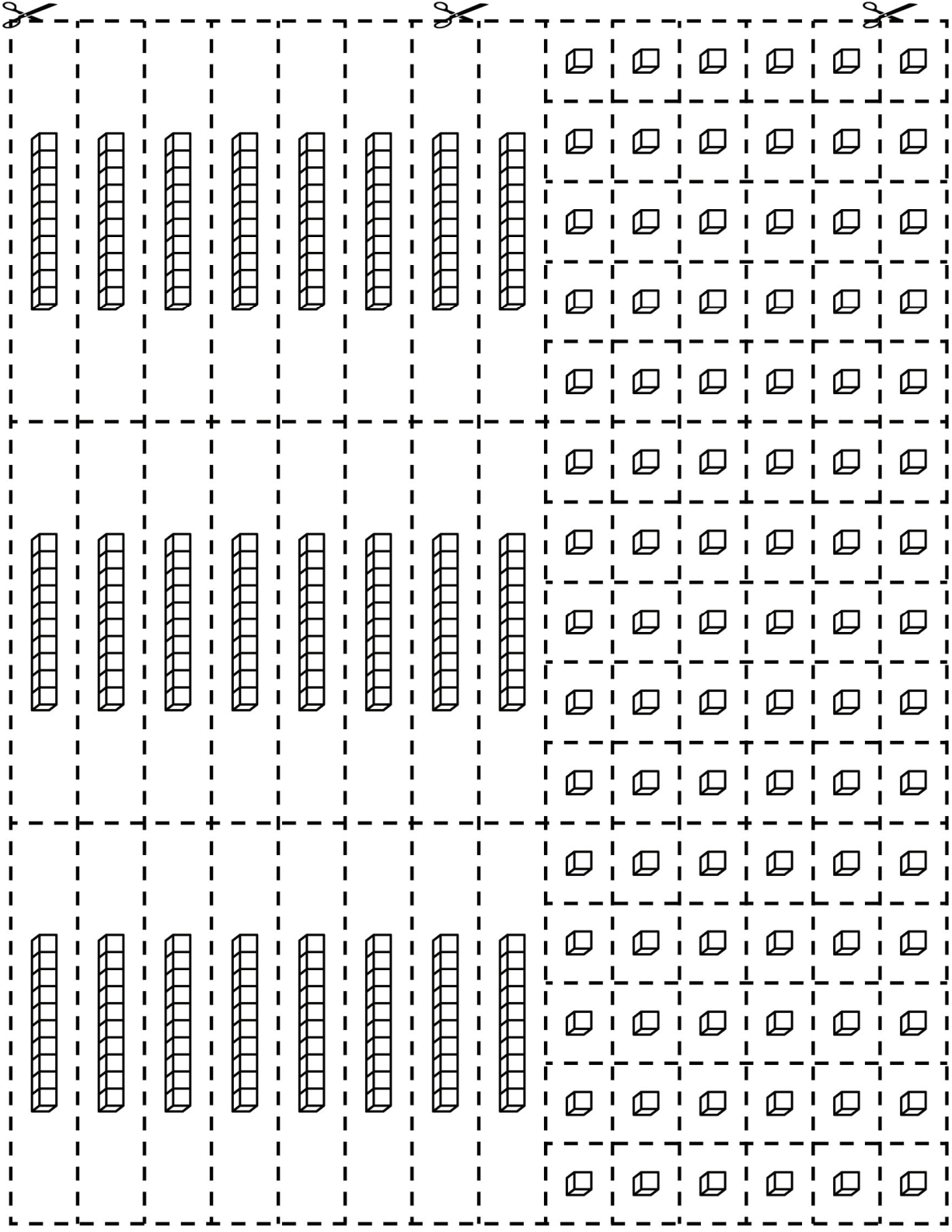
Base Ten Cutouts

Line Master 3-2



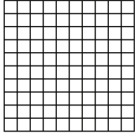
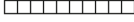

Base Ten Cutouts

Line Master 3-3



How Numbers Work Math Mat

Line Master 4

Hundreds 	Tens 	Ones 

Many Numbers

Line Master 5

Name: _____

Use these 3 digits: _____

What numbers can you make?

2-digit Numbers	3-digit Numbers

Choose one number and describe it. You might tell and show:

- the number of 100s, 10s, and 1s
- how you can draw it
- whether it is odd or even
- what number is 10 greater or less
- what number is 100 greater or less
- whether it is greater or less than 500

Mini Hundred Charts

Line Master 6-1

Name: _____

Colour all numbers with a 3 in them.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all numbers with an 8 in them.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all numbers you say when you count by 5.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all numbers you say when you count by 4.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Mini Hundred Charts

Line Master 6-2

Name: _____

Colour all the numbers with digits that add to 10.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all the numbers with digits that add to 8.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all the numbers with digits that add to 13.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all the numbers with 2 digits that are the same.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Mini Hundred Charts

Line Master 6-3

Name: _____

Colour all the even numbers.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all the odd numbers.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all the numbers with digits that differ by 1 (for example, 23 and 98).

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour all the numbers with the tens digit greater than the ones digit.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Mini Hundred Charts

Line Master 6-4

Name: _____

Write your own rules for colouring numbers.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Many Ways

Line Master 7

Name: _____

			Number
			Draw It
			Draw It Another Way
			Draw It Another Way

10	20	30
40	50	60
70	80	90
100	200	300
400		

Make 1000

Line Master 9

Name: _____

Turn	Card	Total
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

Turn	Card	Total
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

1000 in 10 Rolls

Line Master 10

What You Need:

- number cube

How to Play:

1. Take turns rolling the number cube.
2. On your turn, you can use the number to make a multiple of 100 or 10. For example, if you roll 3 you can make the number 300 or the number 30.
3. Make a recording sheet and record your decision.
4. Each of you has 10 turns.
5. The player who is closest to 1000 wins.

Turn	I roll...	I make...	My running total
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
How close are you to 1000?			

Numbers in Our World

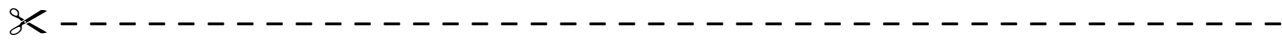
Line Master 11

Name: _____

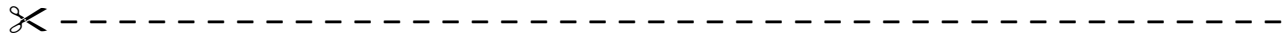
Numbers That Tell When	Numbers That Tell Where
Numbers That Tell How Much	Numbers That Tell How Many

Number Problems

Line Master 12-1



Choose a 3-digit number.
Show 3 different ways to represent it. You can use words, numbers,
and drawings.

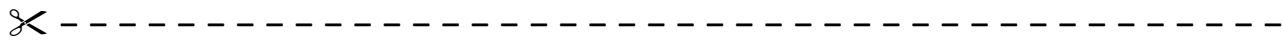


Write the number 65 using these ancient number systems.

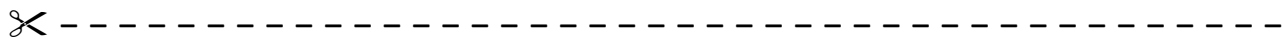
Babylonian

Egyptian

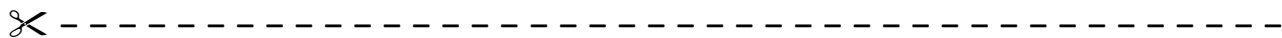
Maya



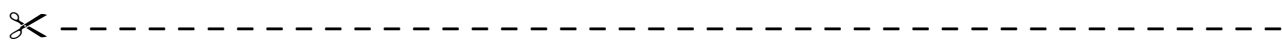
I am a 3-digit odd number.
I have 3 hundreds and 6 tens.
What numbers can I be?



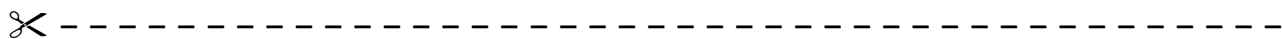
You say me when you count by 5s.
I have 3 digits.
I am an even number.
I have 6 hundreds.
I have an odd number of tens.



How can you show 345 using Base Ten Blocks if you only have
2 flats?



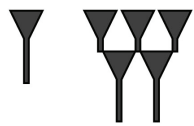
Make up a number riddle.
Use at least 3 clues.
Use these words in your clue:
hundreds, tens, ones



Choose a 3-digit number.
Show 3 different ways to represent it. You can use words, numbers,
and drawings.

answers will vary

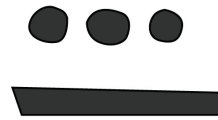
Write the number 65 using these ancient number systems.



Babylonian



Egyptian



Maya

I am a 3-digit odd number. *360, 361, 362, 363, 364,*
I have 3 hundreds and 6 tens. *365, 366, 367, 368, 369*
What numbers can I be?

You say me when you count by 5s.
I have 3 digits. *600, 610, 620, 630, 640,*
I am an even number. *650, 660, 670, 680, 690*
I have 6 hundreds.
I have an odd number of tens.

How can you show 345 using Base Ten Blocks if you only have
2 flats?

2 flats, 14 rods, and 5 cubes

Make up a number riddle.

Use at least 3 clues.

answers will vary

Use these words in your clue:

hundreds, tens, ones

Math Makes Me Laugh

Line Master 1 (Assessment Master)

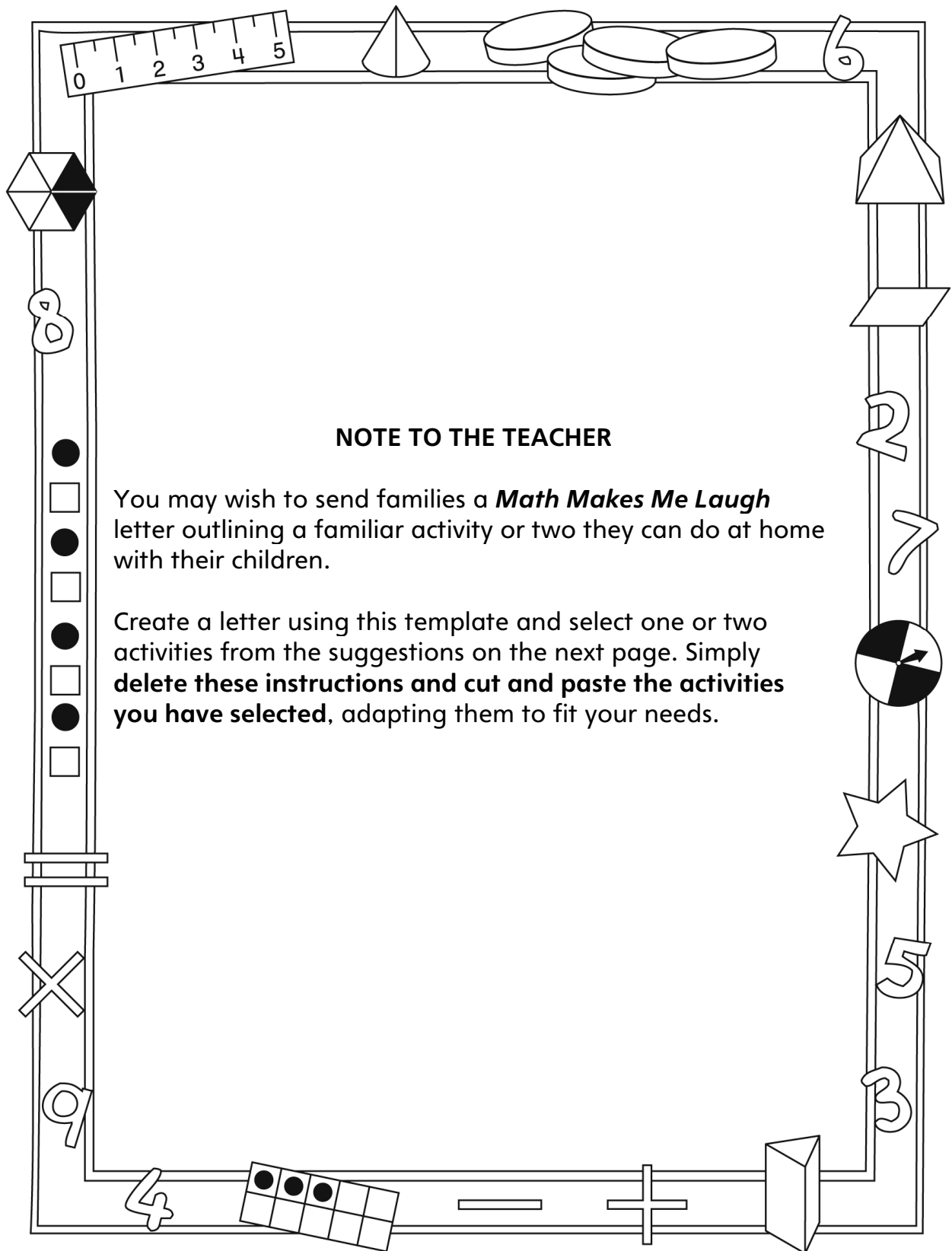
Name: _____

Add and Subtract to 1000	Not observed	Sometimes	Consistently
Estimates sums			
Estimates differences			
Uses mental strategies to solve addition and subtraction problems			
Estimate, Compare, and Order Numbers to 1000			
Rounds numbers to multiples of 10			
Identifies how many more/less one quantity is compared to another			
Compares quantities using sets and/or numerals			
Orders quantities using sets and/or numerals			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

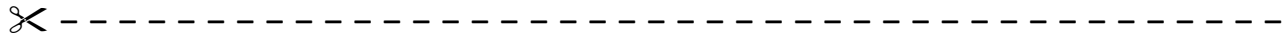
You may wish to send families a *Math Makes Me Laugh* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

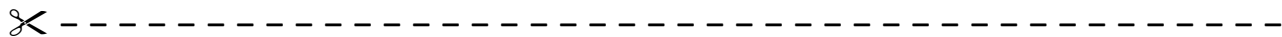
Connecting Home and School Line Master 2–2

Dear Family:

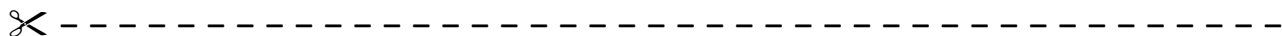
We have been working on ***Math Makes Me Laugh***, which focuses on making estimates, adding and subtracting, and comparing and ordering numbers. Try this activity at home with your child.



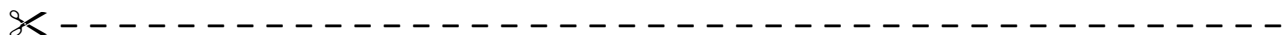
Reading the Story: As you read the story, enjoy discussing numbers that the main character tries to explain. Together, list occasions when you estimate to find how many or how much. Encourage your child to ask other family members and friends for ideas, and add them to your list of situations in which estimates are preferred or acceptable. Please let us know what you find out by (date).



Get Close to 1000: For this game, you need 4 sets of cards with the numbers 0 to 9. The goal is to reach a sum that is as close to 1000 as possible without going over. Players begin by selecting 3 number cards and using them to make a 3-digit number. Players select another 3 cards, make a new number, and add it to the first number. The player closest to 1000 wins! You can play many times, scoring a point for each win and adding your points up at the end.



Collecting Numbers: Invite your child to cut numbers from old newspapers, magazines, flyers, brochures, and calendars. When satisfied with the collection, your child can order the numbers from least to greatest and glue them on a sheet of paper. Please have him/her bring the numbers to class by (date). Your child will find out if anyone found a number greater than or smaller than his/hers and if others found numbers that are the same.



Sincerely,

Pages and Books

Line Master 3

Name: _____

Book title: _____

How many pages are in the book? _____

How many pages have been read? _____

Estimate the number of pages left to read. _____

Find the number of pages left to read.

Show your work.

You can use numbers, words, and/or drawings.

How Many Steps?

Line Master 4

Name: _____

Number of steps walking from _____

to _____

Estimate: _____

Count: _____

How many steps would it take to walk there and back?

Show your work.

You can use numbers, words, and/or drawings.

How many more steps do you need to reach _____ steps?

Show your work.

You can use numbers, words, and/or drawings.

I'm Thinking of a Number!

Line Master 5

Name: _____

Tally Guesses



Tally Guesses



Estimate, Then Calculate

Line Master 6

Name: _____

	Right handful	Left handful
Estimate		
Count		

Estimate how many you have altogether. _____

Find out how many you have altogether.

Show your work.

You can use numbers, words, and/or drawings.

0	1	2
3	4	5
6	7	8
9		

Get Close to 1000

Line Master 8

What You Need:

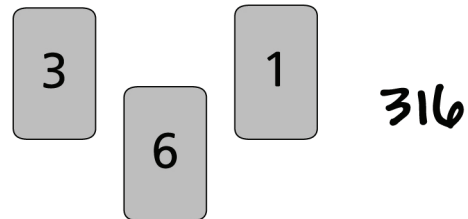
- 4 sets of numeral cards (0 to 9)
- paper for recording

How to Play:

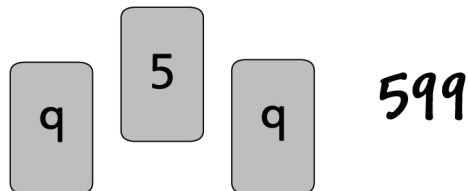
1. Choose 3 cards.

Make a 3-digit number.

Record the number.



2. Choose 3 more cards and make another 3-digit number.



3. Add the numbers you made.
You want your total to be close to 1000, but not greater than 1000.

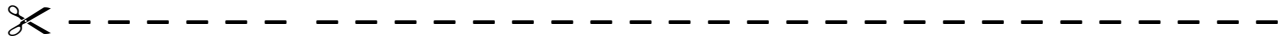
$$316 + 599 = 915$$

The player with the total closest to 1000 wins.

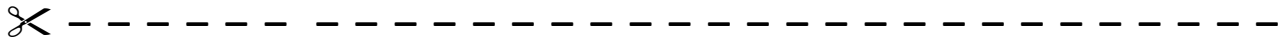
Solve the Problem

Line Master 9

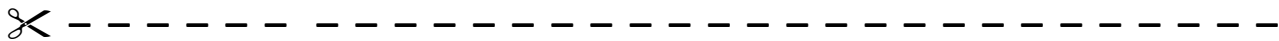
Eddie walks 565 steps to the end of the block.
His goal is to walk 1000 steps.
How many more steps must he take to reach his goal?



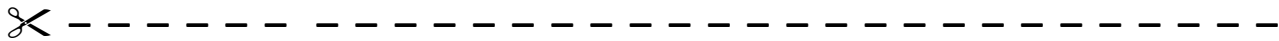
Shin read 3 books this week. Here are the number of pages in each book: 98, 125, 364.
His goal is to read 600 pages.
How many more pages must he read to reach his goal?



Roni's goal is to walk a total of 10 000 steps.
She walked 2655 steps to school. She walked 3570 steps at school.
After she walks home, will she have reached her goal?



Mala read 260 pages this week.
Nate read 435 pages.
How many more pages did Nate read?



Jayne reads 125 pages after school.
She adds this to her total for the week. Now she has read 550 pages.
How many pages had she read before today?

The Street Party

Line Master 1 (Assessment Master)

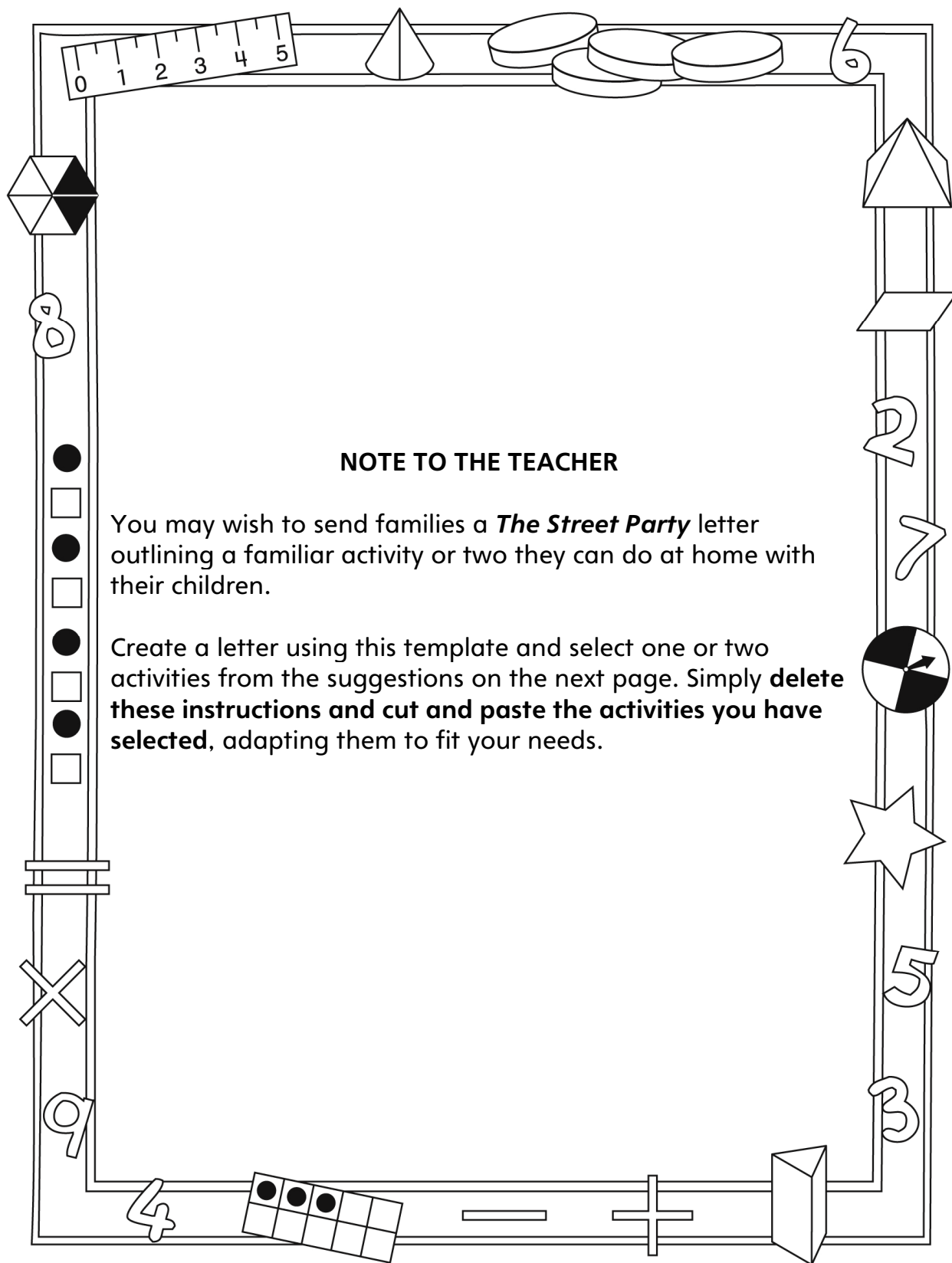
Name: _____

Add and Subtract to 1000	Not observed	Sometimes	Consistently
Estimates sums and differences			
Models and symbolizes addition and subtraction			
Develops mental and personal addition and subtraction strategies			
Compare and Order Numbers to 1000			
Compares quantities and numbers to 1000			
Orders three or more numbers			
Finds how many more/less one quantity is compared to another			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

You may wish to send families a *The Street Party* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

Connecting Home and School Line Master 2–2

Dear Family:

We have been working on *The Street Party*, which focuses on adding and subtracting to 1000, and comparing and ordering numbers to 1000. Try this activity at home with your child.



Reading the Story: As you read the story, enjoy discussing the many 3-digit numbers and scores that are used in the text and in the art. Together, list where you see 3-digit numbers around your home, in print material, or within your community. Your child might like to cut out numbers from old newspapers, magazines, or flyers. He/she can order and glue these numbers from least to greatest onto a large piece of paper.



Get Close to 1000: The rules for Get Close to 1000 are simple. All you need to do is make 4 sets of small cards with the numbers 0 to 9. The goal is to reach a sum that is as close to 1000 as possible without going over. Place the cards face down in a pile. Players draw 3 number cards to make a 3-digit number. They select another 3 cards, make a new number, and add it to the first number. You might choose to add a third number or choose to have the sum of 2 numbers. The player closest to 1000 scores one point.



Play a Target or Tossing Game: Your child has brought home a target game. Play the game together and help each other add points and find the total score. Compare your results to determine the winner. The higher score wins!



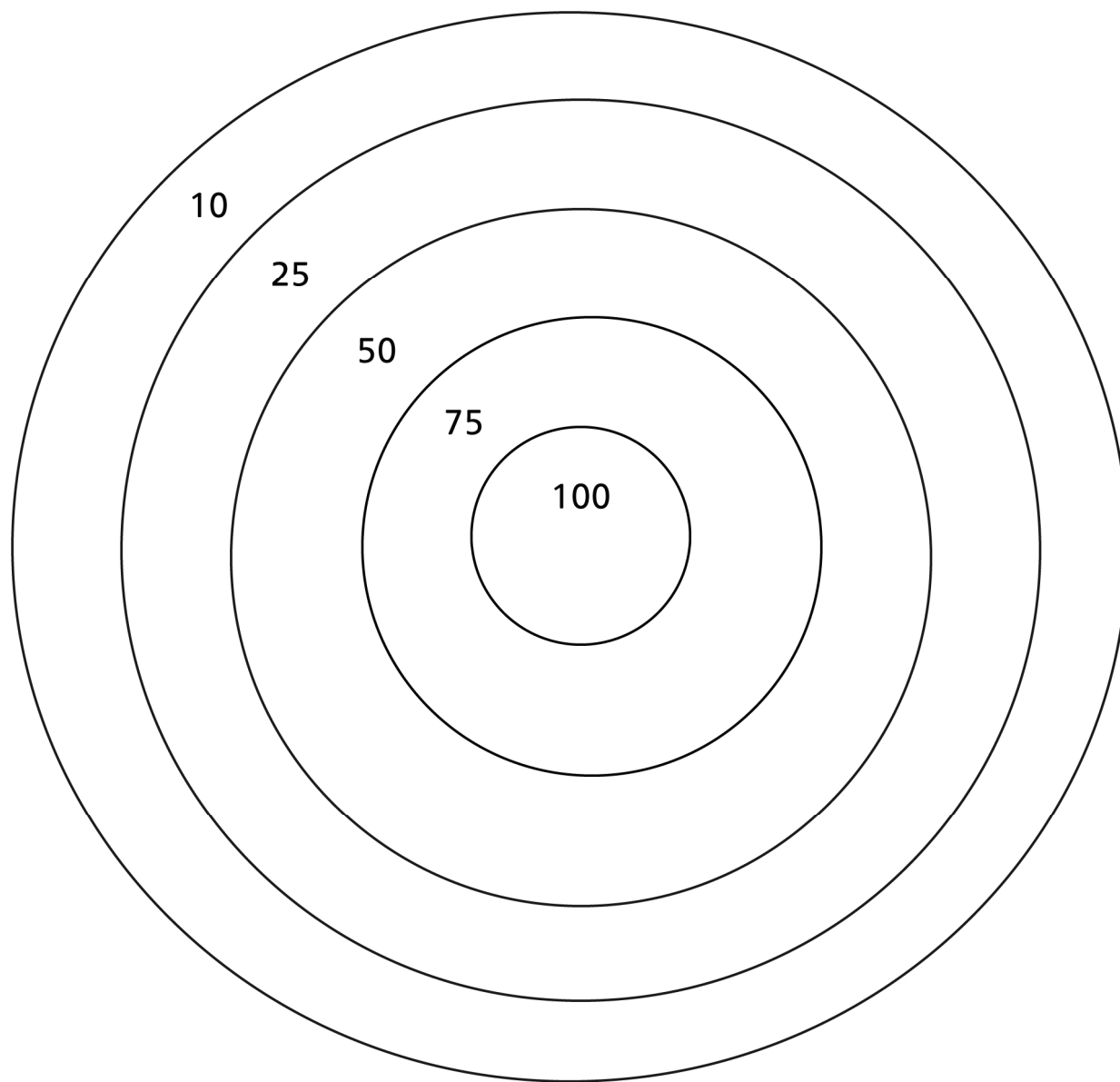
Sincerely,

The Street Party Math Mat Line Master 3

OAK	ELM
MAPLE	WILLOW

Target Game

Line Master 4



Target Game Scoresheet

Line Master 5

Name: _____

Round	Name:	Name:	Winning Score

Order the winning scores from lowest to highest:

--	--	--	--	--	--	--	--	--	--

Roll to 1000

Line Master 6

Your Goal:

To be the first player to reach 1000 (or to be the closest to 1000 without going over).

What You Need:

- a number cube with the numbers 100, 120, 125, 150, 175, 200

How to Play:

- To start, roll the number cube 2 times. Record and add the numbers together.
- For your next turn, roll the number cube once. Record the number and add it to your last sum.
- Take turns. The first player to reach exactly 1000 wins! (Or whoever is the closest to 1000 without going over.)

Here are our scores:

Name:		Name:	

Numeral Cards

Line Master 7

0	1	2
3	4	5
6	7	8
9		

Trophy Winners

Line Master 8

Team: _____, _____

What You Need:

- 4 sets of numeral cards 0 to 9

How to Play:

- For each round, each team draws 3 numeral cards. The team arranges the cards to make the greatest 3-digit number.
- Record the number for each team. Work together to order the scores to show the results for the round.

	Team 1	Team 2	Team 3	Team 4
Round 1 Score				
Results: 1st: _____ 2nd: _____ 3rd: _____ 4th: _____				

	Team 1	Team 2	Team 3	Team 4
Round 2 Score				
Results: 1st: _____ 2nd: _____ 3rd: _____ 4th: _____				

	Team 1	Team 2	Team 3	Team 4
Round 3 Score				
Results: 1st: _____ 2nd: _____ 3rd: _____ 4th: _____				

	Team 1	Team 2	Team 3	Team 4
Round 4 Score				
Results: 1st: _____ 2nd: _____ 3rd: _____ 4th: _____				

The trophy winner is _____ with _____ as the highest number.

Roll and Add

Line Master 9

Your Goal:

- To create two 2-digit numbers that add up to the greatest possible sum.

What You Need:

- 4 number cubes

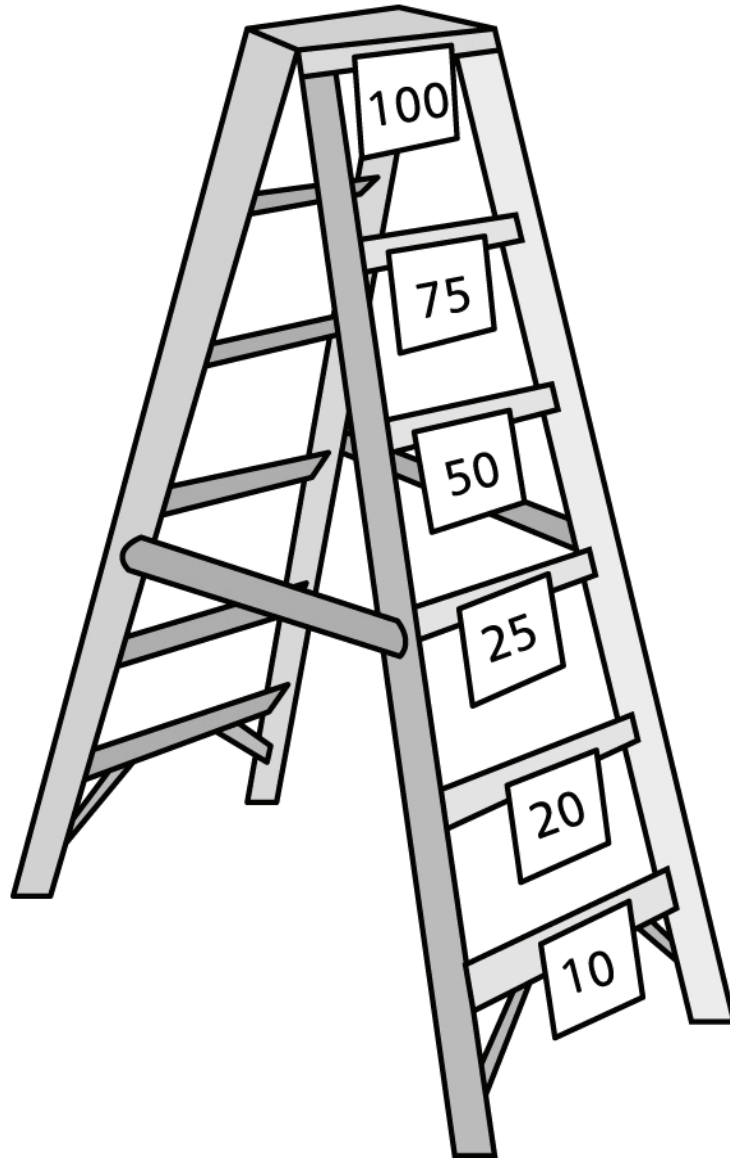
How to Play:

- Roll the number cubes.
- Use the numbers to make your two 2-digit numbers.
- Record your numbers and add.
- Compare your sum with your partner's.
- The player with the greater sum gets 100 points. Is it a tie? You both get 50 points.
- At the end, add your points. The player with the most points wins.

Round	My Number Sentence	Points
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Flying Disk Gameboard

Line Master 10



Solving Problems

Line Master 11-1

Name: _____

Trophy Scoreboard

Score after Round 1:

Team Oak: 189

Team Elm: 198

Team Maple: 201

Team Willow: 190

Put the teams in order:

1st: _____ 2nd: _____ 3rd: _____ 4th: _____

Score after Round 2:

Team Oak: 311

Team Elm: 301

Team Maple: 300

Team Willow: 310

Put the teams in order:

1st: _____ 2nd: _____ 3rd: _____ 4th: _____

Which team scored the most points in Round 2? _____

Prove it!

Solving Problems

Line Master 11-2

Name: _____

There are 210 people at the street party.
108 of them are adults.

How many children are at the street party? _____

Prove it!

They have 216 veggie dogs, 126 chicken dogs, and 161 hot dogs.

What kind of dogs do they have the most of? _____

What kind of dogs do they have the least of? _____

Put the dogs in order from greatest to least.

How many more is the greatest number than the least number?

Prove it!

They collected \$800 at the street party.
They gave \$273 to the hospital.

How much money do they have left? _____

Prove it!

Planting Seeds

Line Master 1 (Assessment Master)

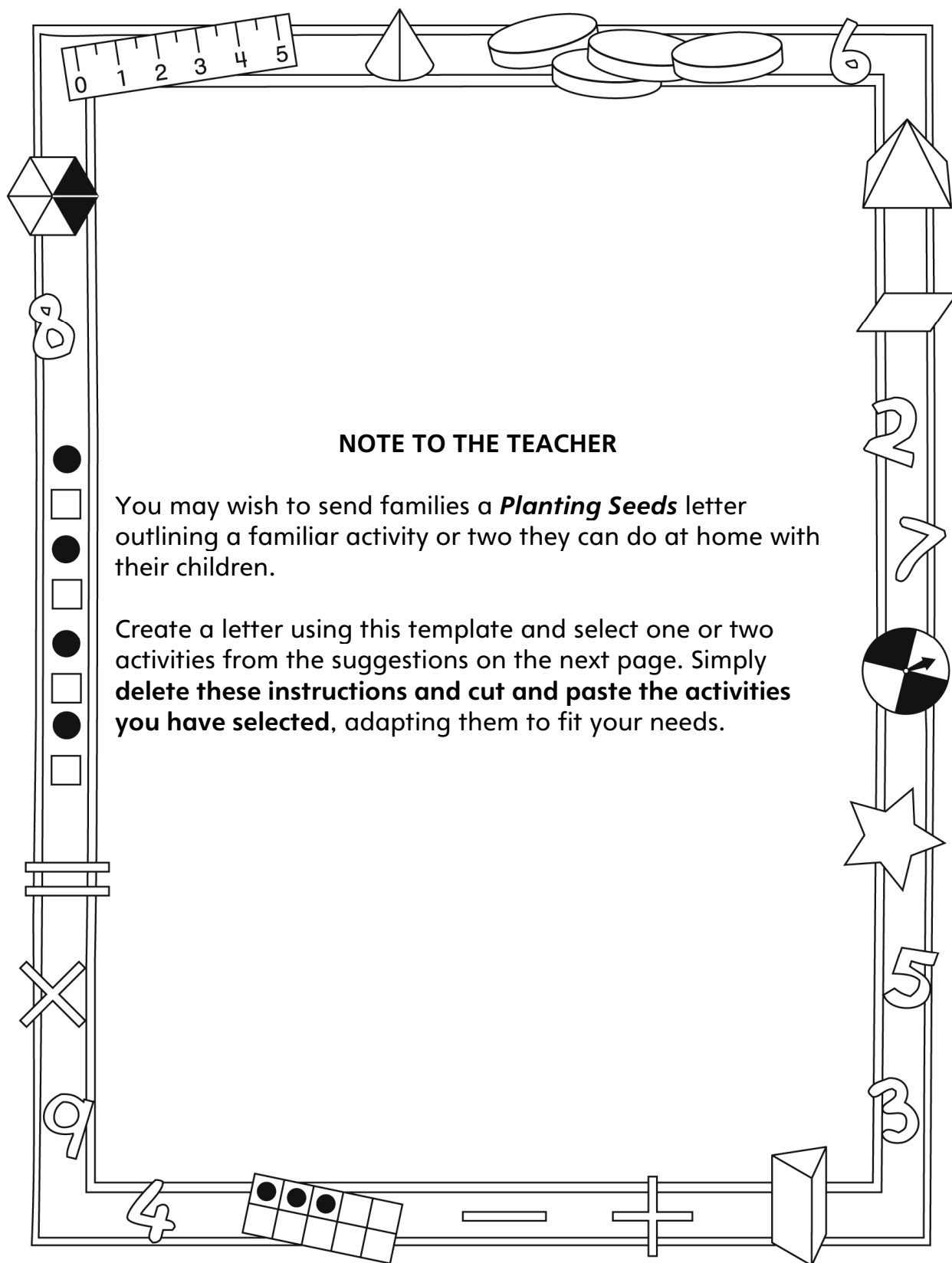
Name: _____

Add and Subtract to 1000	Not observed	Sometimes	Consistently
Uses properties of addition and subtraction			
Estimates sums and differences of multi-digit numbers			
Develops efficient mental strategies to solve equations with multi-digit numbers			
Develop Concept of Multiplication			
Models equal groups and uses \times to symbolize operation			
Models and symbolizes multiplication problem types involving equal groups and relates them to addition			
Skip-counts by factors of 10 (i.e., 2, 5, 10) and multiples of 10 from any given number			
Skip-counts by factors of 100 (i.e., 20, 25, 50) and multiples of 10 from any given number			

Strengths:

Next Steps:

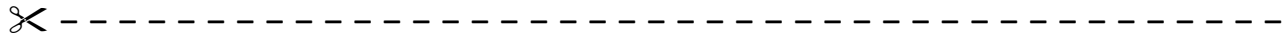
Connecting Home and School Line Master 2-1



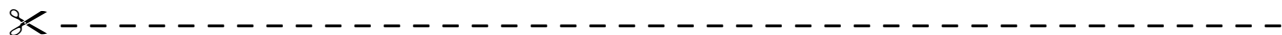
Connecting Home and School Line Master 2-2

Dear Family:

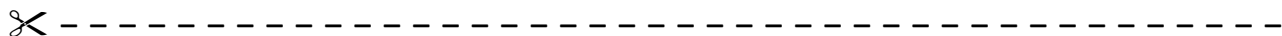
We have been working on ***Planting Seeds***, which focuses on adding and subtracting to 1000 and developing the concept of multiplication. Try this activity at home with your child.



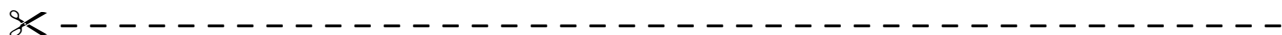
Reading the Story: As you read the story, encourage your child to follow along as the seeds are planted. Your child can count and compare the number planted and the number harvested. After reading, engage your child in finding the difference between numbers in their daily lives. For example: **It takes 30 minutes to eat dinner and only 10 minutes to eat breakfast. How much longer does it take to eat dinner?**



Multiplication Race: Write out the numbers 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, and 18 on a piece of paper. Then play using a number cube. After rolling, multiply the number by 2 or 3 and cross off the appropriate number from the list. Players can compete to see who crosses off all the numbers first or they can work together to cross the numbers off.



Design Your Own Garden: With your child, explore your outdoor space (including nearby parks or the school yard). Together, design a plan for a garden and choose what to plant based on what is most appropriate in your setting. Encourage your child to organize plants into rows. Ask her/him to tally the number of plants in each section and record the total number of plants in the garden.



Sincerely,

What's the Difference?

Line Master 3

Name: _____

My arm-span is:

My partner's arm-span is:

The difference between our arm-spans is:

Adding Vegetables

Line Master 4

Name: _____

Solve using words, numbers, and/or drawings.

The community harvested 135 zucchinis and 310 carrots.
How many zucchinis and carrots did they harvest altogether?

How Many Ears of Corn?

Line Master 5

Name: _____

<p>_____ stalks of corn. _____ ears on each stalk.</p> <p>_____ x _____ = _____</p>	<p>_____ stalks of corn. _____ ears on each stalk.</p> <p>_____ x _____ = _____</p>
<p>_____ stalks of corn. _____ ears on each stalk.</p> <p>_____ x _____ = _____</p>	<p>_____ stalks of corn. _____ ears on each stalk.</p> <p>_____ x _____ = _____</p>
<p>_____ stalks of corn. _____ ears on each stalk.</p> <p>_____ x _____ = _____</p>	<p>_____ stalks of corn. _____ ears on each stalk.</p> <p>_____ x _____ = _____</p>

My Garden Design

Line Master 6

Name: _____

Design your own garden. Record what you planted using words, numbers, and/or drawings.



I planted _____ rows of _____.

I planted _____ rows of _____.

I planted _____ rows of _____.

Planting Seeds Problems

Line Master 7-1



Volunteers harvested 360 tomatoes and 400 ears of corn. How many tomatoes and ears of corn did they harvest altogether?



Last year, 160 carrots sprouted and 140 carrots were harvested. What is the difference between the number of carrots that sprouted and the number of carrots that were harvested?

Planting Seeds Problems

Line Master 7-2



Volunteers harvested 54 zucchinis last year. How many zucchinis would they have if that number doubled?



Suppose volunteers plant 6 rows of 7 tomato plants. How many tomato plants would they plant altogether?

Sports Camp

Line Master 1 (Assessment Master)

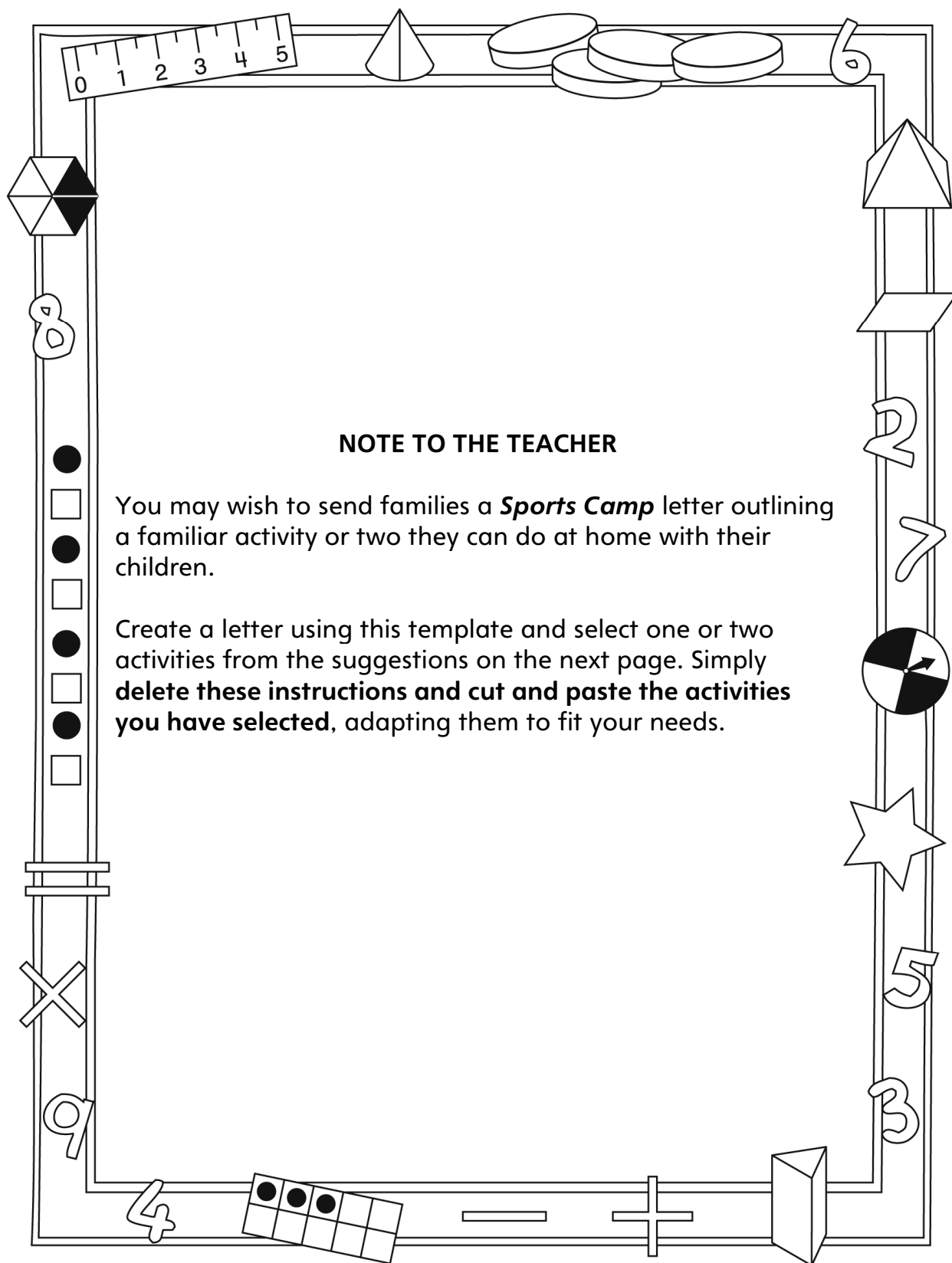
Name: _____

Multiplication and Division	Not observed	Sometimes	Consistently
Finds how many in equal groups (multiplies)			
Shares groups equally (divides)			
Models, symbolizes, and solves grouping and sharing problems (uses \times , \div , and $=$)			
Relates multiplication and division			
Addition and Subtraction			
Makes reasonable estimates for sums and differences			
Solves addition and subtraction problems			
Uses mental and personal addition and subtraction strategies			
Uses appropriate number sentences to express and solve addition and subtraction problems			
Relates repeated addition and repeated subtraction to multiplication (grouping) and division (sharing)			

Strengths:

Next Steps:

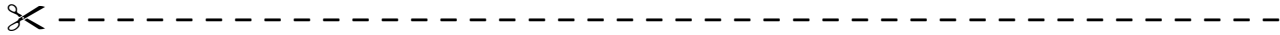
Connecting Home and School Line Master 2-1



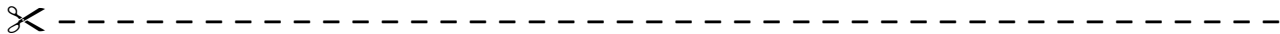
Connecting Home and School Line Master 2-2

Dear Family:

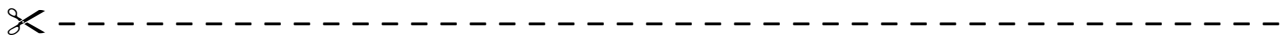
We have been working on *Sports Camp*, which focuses on making and sharing equal groups, and relating addition to multiplication and subtraction to division. Try this activity at home with your child.



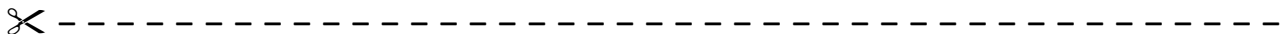
Reading the Story: As you read the story, enjoy discussing what happens with each new attempt to make equal teams. Predict whether the teams will be equal. Make up problems based on the situations. For example: How many balls are needed if each group needs 3 and there are 5 groups?



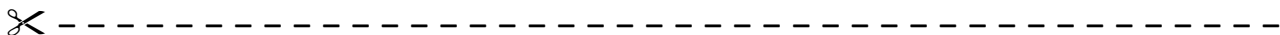
The Math Mat: On the inside back cover, you will find a gym floor. Use this along with small objects to explore making equal groups out of a given number of players. For example: What different ways can you make equal teams with 30 players?



Our Family: How many people are in your family? How many items do you need for each person to have 1 coat? 2 hats? 3 shirts? 4 pairs of pants? 5 books? 6 wishes?



Equal Groups in Nature: Make up problems using equal groups in nature. For example: Which is more: the number of legs on 6 ants or the number of legs on 5 spiders? Please send problems to class by (DATE). We plan on solving them!



Sincerely,

Making Equal Teams

Line Master 3

Name: _____

There are **24 players**.

The coach wants to make equal teams.

How many different ways can the players be on equal teams?

Find out!

Use drawings, numbers, and/or number sentences to show the different equal teams.

Sports Camp Attendance

Line Master 4

Name: _____

How many children are at sports camp?

_____ basketball players

_____ hockey players

_____ baseball players

How many children are there altogether?

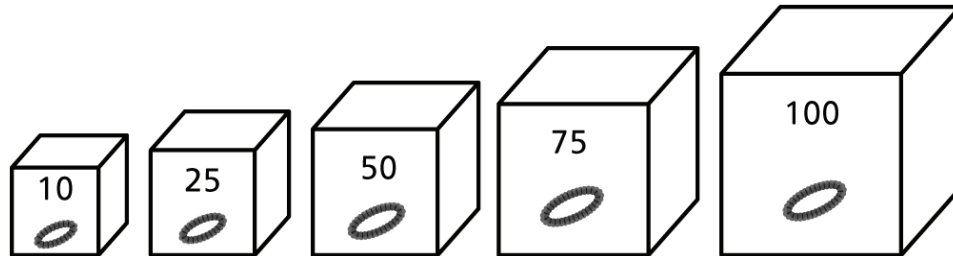
There are spaces for 200 children.
How many spaces are still open?

Teamwork

Line Master 5

Name: _____

You need _____ wristbands.



What boxes will you open?
How many extras will you have?
Show your work.

Hundred Chart

Line Master 6

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Roll and Colour

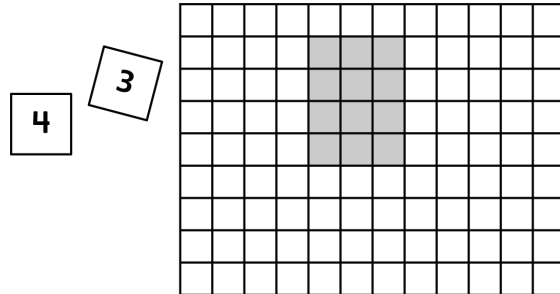
Line Master 7

What You Need:

- 1 cm grid paper
- 1 number cube
- 2 crayons (a different colour for each player)
- 2 scoresheets (one for each player)

How to Play:

1. Roll the number cube 2 times.
Use the numbers to colour rows and columns.



2. Write the numbers you rolled and a multiplication sentence.

Turn	Roll	Multiplication Sentence
1	4 and 3	$4 \times 3 = 12$

3. Take turns doing Steps 1 and 2. Continue until one of you cannot find a place to colour what you roll.

4. Find the total number of squares you coloured.

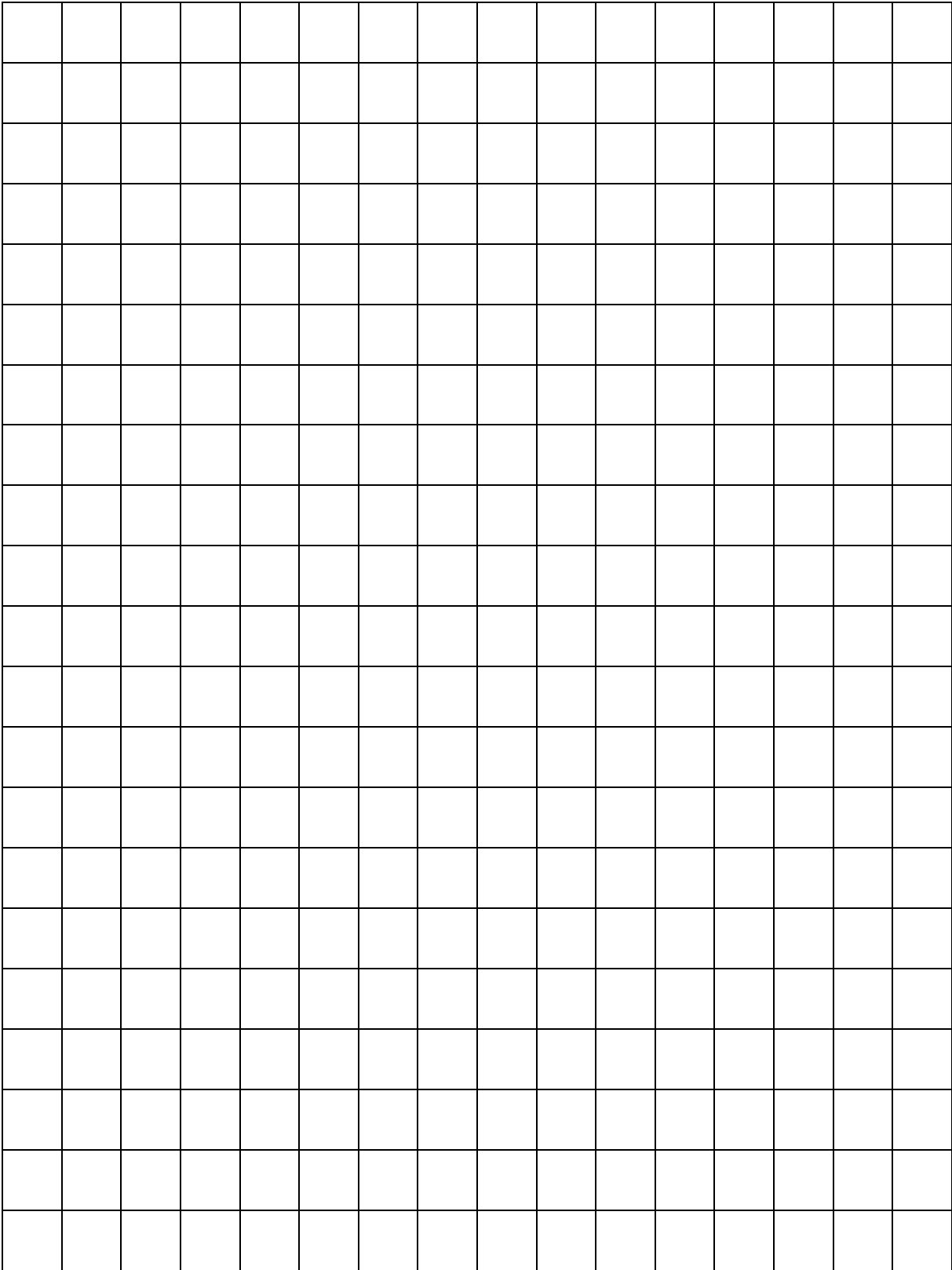
Turn	Roll	Multiplication Sentence
1	4 and 3	$4 \times 3 = 12$
2	1 and 3	$1 \times 3 = 3$
3	5 and 5	$5 \times 5 = 25$

Total: $12 + 3 + 25 = 40$

The player with the most squares coloured wins!

1 cm Grid Paper

Line Master 8



Roll and Colour Scoresheet

Line Master 9

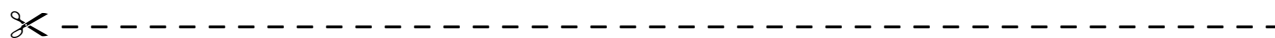
Name: _____

Turn	Roll	Multiplication Sentence

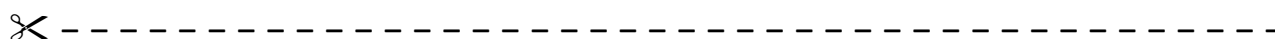
Total:

Solve the Problem

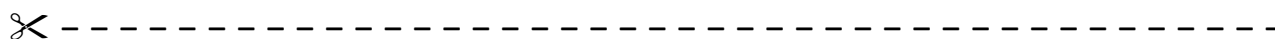
Line Master 10-1



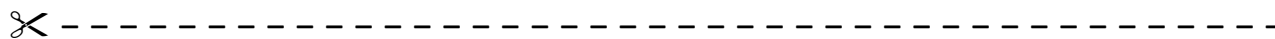
There are 32 players on 4 equal teams.
How many players are on each team?
Use drawings and a number sentence to show your thinking.



There are 21 players on 3 equal teams.
How many players are on each team?
Use drawings and a number sentence to show your thinking.

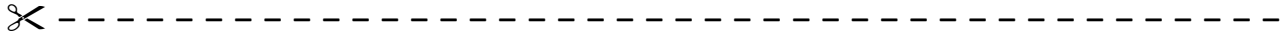


There are 40 players on 5 equal teams.
How many players are on each team?
Use drawings and a number sentence to show your thinking.



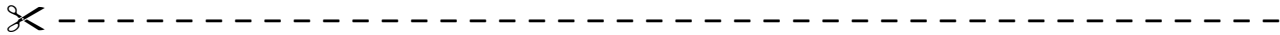
Solve the Problem

Line Master 10-2



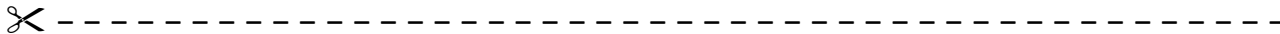
Draw a sketch.
Write a multiplication sentence.

5 nets, each with 6 balls



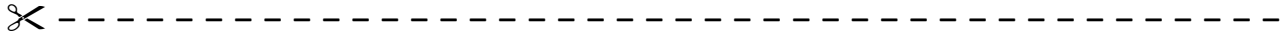
Draw a sketch.
Write a multiplication sentence.

3 rows, each with 3 pylons



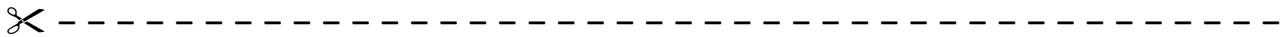
Solve the Problem

Line Master 10-3



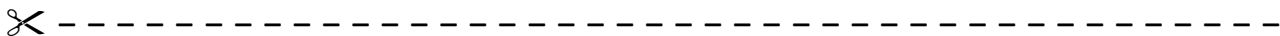
Draw a sketch.
Write a multiplication sentence.

4 rows, each with 4 players



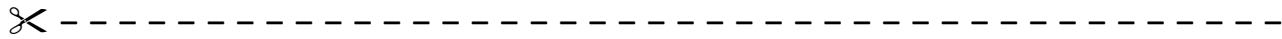
Draw a sketch.
Write a multiplication sentence.

6 nets, each with 3 pucks



Solve the Problem

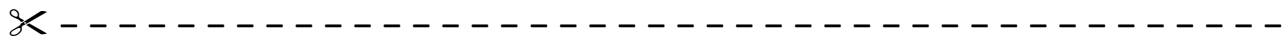
Line Master 10-4



Which is more?

4 teams of 5 players

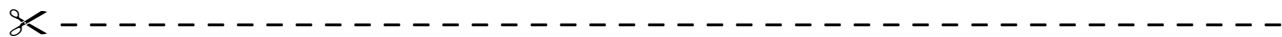
3 teams of 7 players



Which is more?

3 teams of 5 players

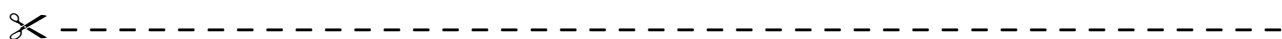
4 teams of 4 players



Which is more?

6 teams of 4 players

5 teams of 5 players



Calla's Jingle Dress

Line Master 1 (Assessment Master)

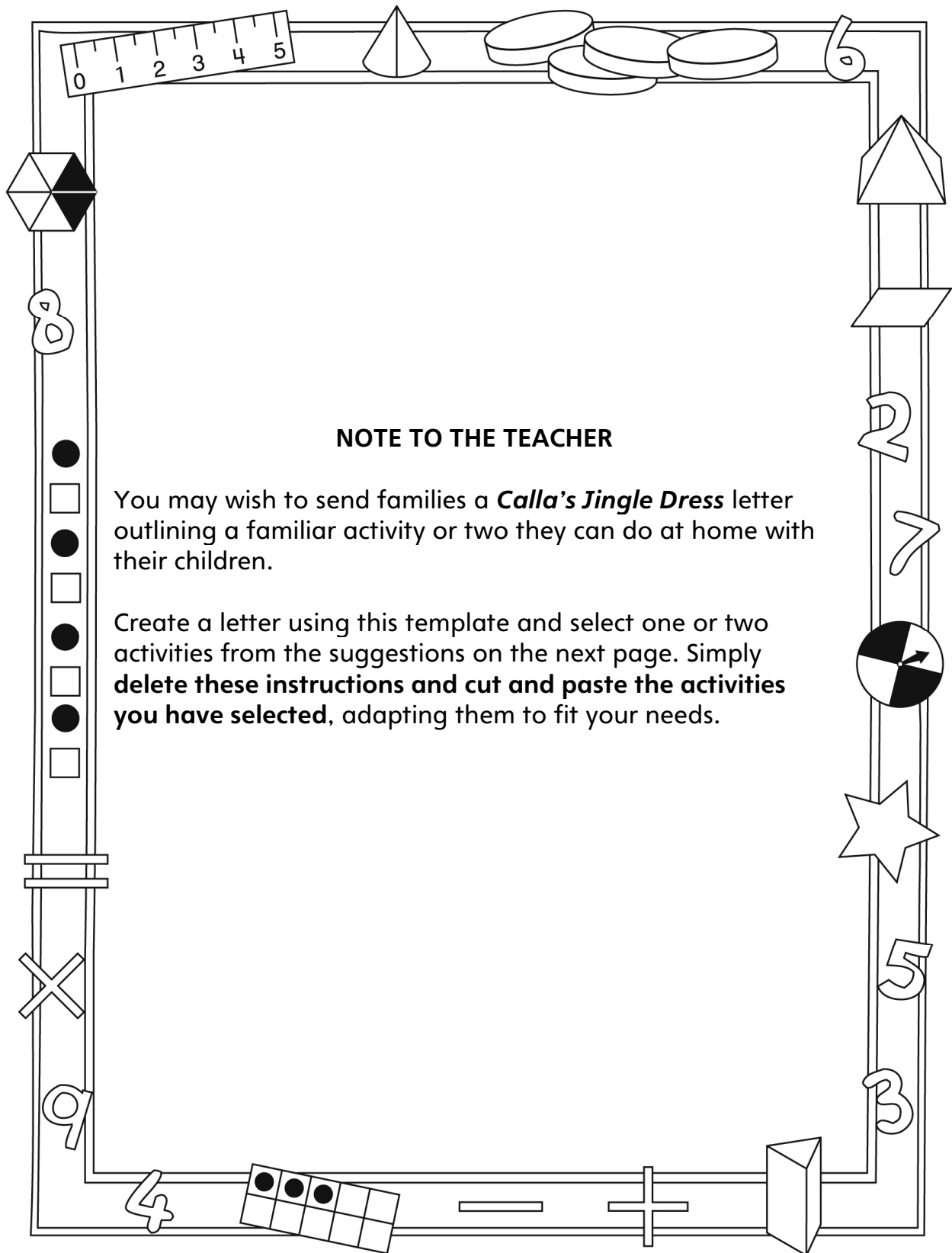
Name: _____

Multiply and Divide to 50	Not observed	Sometimes	Consistently
Solves and creates equal grouping and sharing problems			
Relates to repeated addition and subtraction			
Uses symbols (\times , \div , $=$) to record			
Add and Subtract to 100			
Estimates sums and differences			
Develops efficient mental strategies to solve addition and subtraction problems			
Uses known addition and subtraction facts to solve problems			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

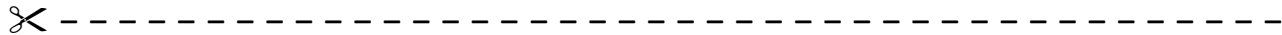
You may wish to send families a *Calla's Jingle Dress* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

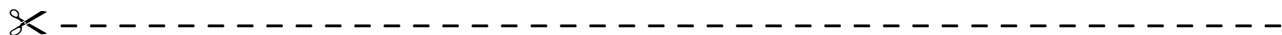
Connecting Home and School Line Master 2–2

Dear Family:

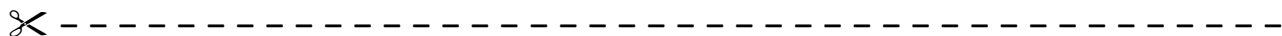
We have been working on *Calla's Jingle Dress*, which focuses on multiplying and dividing to 50, and adding and subtracting to 100. Try this activity at home with your child.



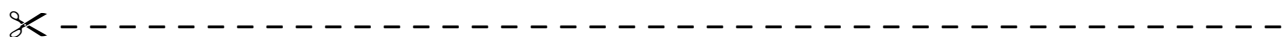
Reading the Story: As you read the story, encourage your child to follow along as Calla makes her dress. Your child can count the number of jingles, figure out the cost of materials, and arrange the baskets into equal groups. After reading, engage your child in arranging numbers and items around your home into equal groups. For example: We have 6 cookies for 3 people. How many cookies does each person get?



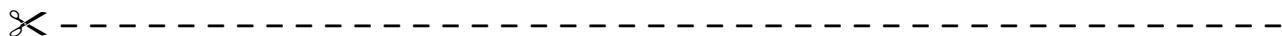
Roll and Multiply: With your child, take turns rolling 2 number cubes, recording the numbers, and multiplying the numbers together. Record your answers. After you have had 5 turns each, add your answers together. The person with the higher total is the winner.



Number Stories: Encourage your child to tell descriptive stories about his/her day using numbers. Challenge your child to develop stories that use a combination of addition and subtraction, or that focus on equal groups. For example, your child can describe baking cookies by adding the number of ingredients and figuring out how many equal rows of cookies are on each baking sheet. Your child can create a drawing or mini-book to express ideas.



Shopping Lists: Encourage your child to help organize family shopping trips. Invite her/him to make lists of groceries, record quantities, and tally final costs.



Sincerely,

How Many Jingles?

Line Master 3

Name: _____

A jingle dress has 8 rows with 4 jingles in each row. How many jingles are there on the dress? Solve by using words, numbers, and/or drawings.

8 Rows of 4 Jingles = _____

Hundred Chart

Line Master 4

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Equal Groups

Line Master 5

Name: _____

My bag has _____ counters.

I can make _____ equal groups of _____.

I can make _____ equal groups of _____.

Class Price List

Line Master 6

Item	Price
Pack of Pencils	\$3
Pack of Markers	\$6
Pack of Crayons	\$4
Sticky Notes	\$5
Construction Paper	\$5
Mini Whiteboard	\$7
Stickers	\$4
3-Hole Punch	\$10
Pack of Notebooks	\$8
Pencil Sharpener	\$12

My Shopping List

Line Master 7

Name: _____

Item	Price	Quantity	Subtotal
TOTAL SPENT:			

More or Less

Line Master 8-1

Name: _____

Which has more jingles? Solve by using words, numbers, and/or drawings.

7 Rows of 3 Jingles = _____

3 Rows of 7 Jingles = _____

More or Less

Line Master 8-2

Name: _____

Which has more jingles? Solve by using words, numbers, and/or drawings.

5 Rows of 6 Jingles = _____

4 Rows of 8 Jingles = _____

Friendly Number Facts

Line Master 9

Name: _____

Sticky note:

Sticky note:

Sticky note:

Roll and Multiply

Line Master 10

Name: _____

Roll	Number Cube 1	Number Cube 2	Multiplication Sentence	Answer
1				
2				
3				
4				
5				
Total of 5 answers:				



Name: _____

Roll	Number Cube 1	Number Cube 2	Multiplication Sentence	Answer
1				
2				
3				
4				
5				
Total of 5 answers:				

Finding Equal Groups

Line Master 11

Find equal groups and describe them using words, numbers, and/or drawings. Complete the statements below using numbers.

There are _____ equal groups of _____.

There are _____ in total.

Jingle Dress Problems

Line Master 12-1



Calla's dress has 5 rows of 3 jingles. How many jingles does she have altogether? Show your thinking by using words, numbers, and/or drawings.



It took Calla 4 minutes to make 1 jingle. How long will it take her to make 4 jingles? Show your thinking by using words, numbers, and/or drawings.

Jingle Dress Problems

Line Master 12-2



Calla has 20 jingles. How many different ways can she organize them into rows of equal amounts? Show your thinking by using words, numbers, and/or drawings.



Calla has 18 jingles. How many different ways can she organize them into rows of equal amounts? Show your thinking by using words, numbers, and/or drawings.

Hockey Homework

Line Master 1 (Assessment Master)

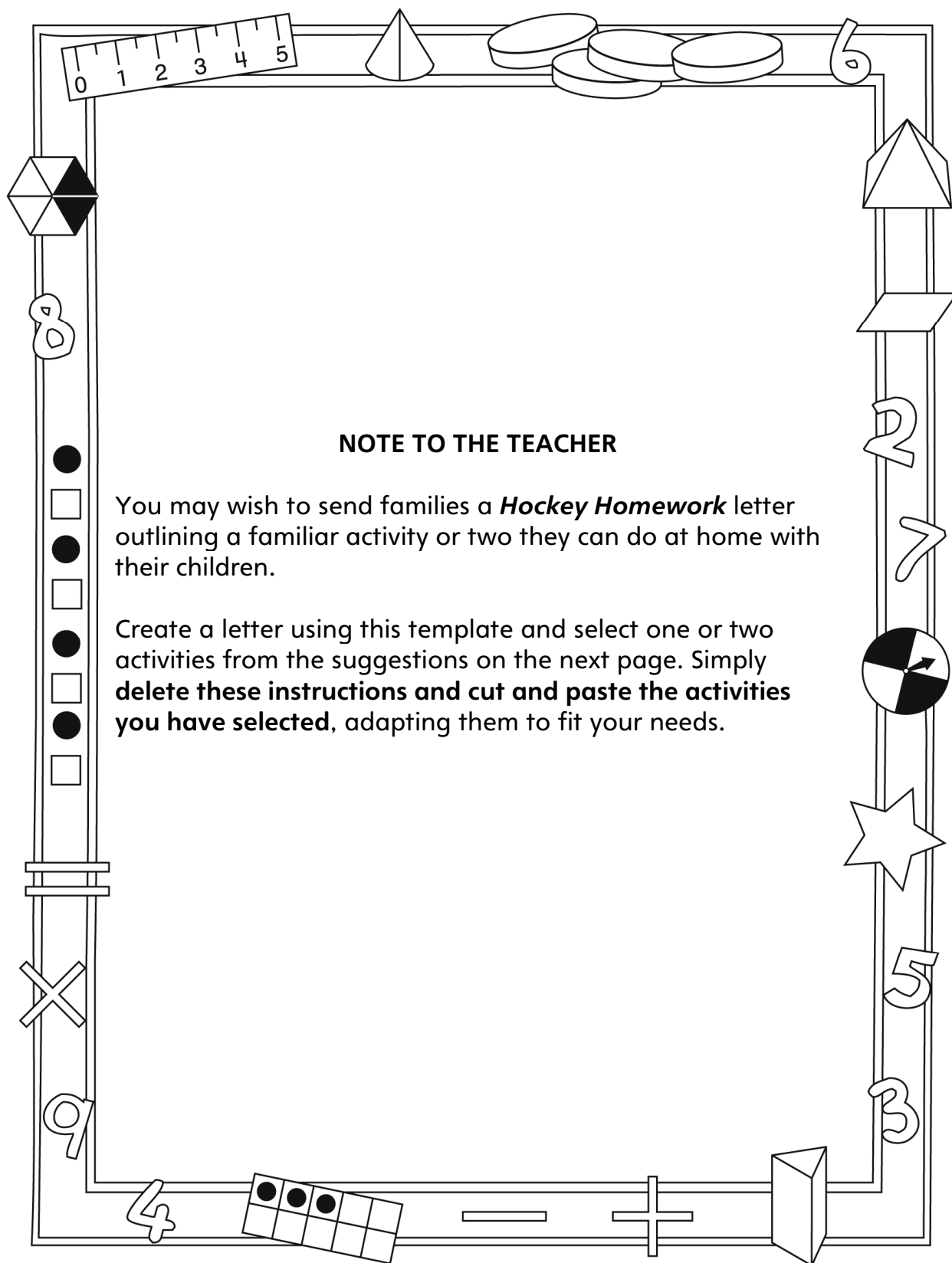
Name: _____

Split Wholes into Equal Parts to Make Fractions	Not observed	Sometimes	Consistently
Uses fractions to describe contexts that are part of a whole or part of a set			
Splits wholes (e.g., shapes, intervals, sets) into equal parts			
Uses fraction symbols as labels (optional in some provinces)			
Compare Fractions			
Uses visual models (area model, set model, linear model) to compare fractional size			
Determines the relationship between the number of parts of a whole and the size of the parts			
Recognizes that the size of the whole matters when comparing fractions			

Strengths:

Next Steps:

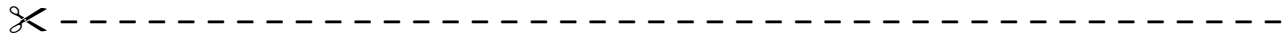
Connecting Home and School Line Master 2-1



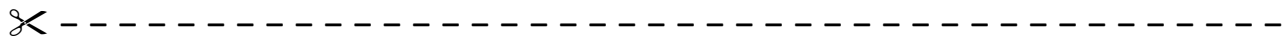
Connecting Home and School Line Master 2–2

Dear Family:

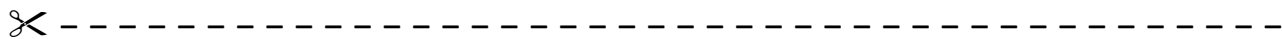
We have been working on *Hockey Homework*, which focuses on splitting wholes into equal parts to make fractions, and comparing fractions. Try this activity at home with your child.



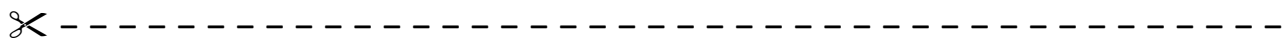
Fraction Scavenger Hunt: Grab a smart phone, tablet, camera, or paper and markers, and go find fractions! Set a time limit and record as many fractions as you can. Stay in the house, or go for a walk in nature or around the neighbourhood.



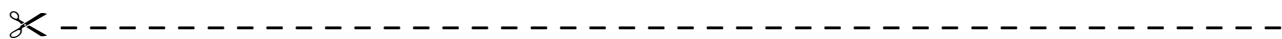
Bake with Fractions: Bake or cook with your child using non-metric measuring tools, such as measuring cups. Point out any fractions written on the items, such as “ $\frac{1}{2}$ tsp.” Invite your child to see how many of one can fit into another. It can be fun to estimate first, and then check how close the estimation was.



Build Fractions: Join your child in using toy building blocks to represent fractions. Build a structure together and then ask questions such as: **What fraction of the blocks are red?** Or, ask your child to build a structure or shape using specific fractions; for example, say: **Let’s make a rectangle that is one-fourth blue.**



Practise fair sharing: Gather up items that can be shared, such as food (e.g., grapes or crackers), or a non-food item that can be divided, such as a “pizza” made of modelling clay or ribbons that can be cut. Invite your child to share the items equally among the people in a group. The “people” could be a collection of dolls stuffed animals, or toys. Repeat with different numbers of things to be shared for as long as your child remains interested. You might also vary the number of people to be shared with. Discuss why some are more difficult to share fairly than others (e.g., making thirds or fifths).



Sincerely,

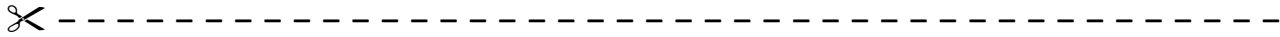
Grid Paper

Line Master 3

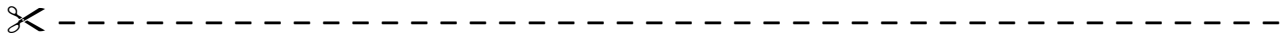
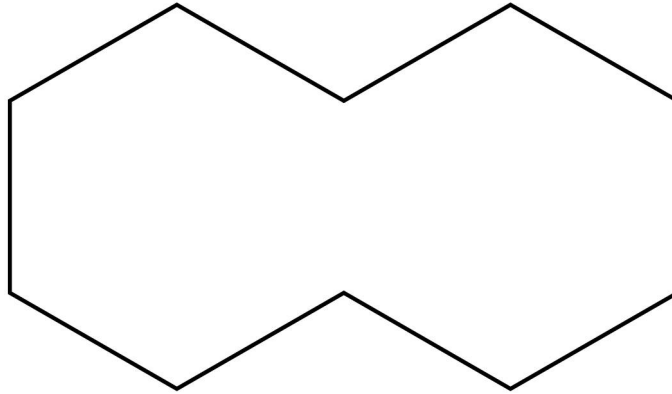
Name: _____

Equal Parts Mat

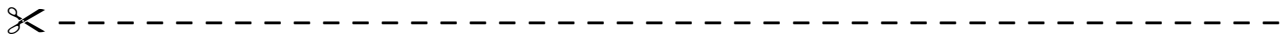
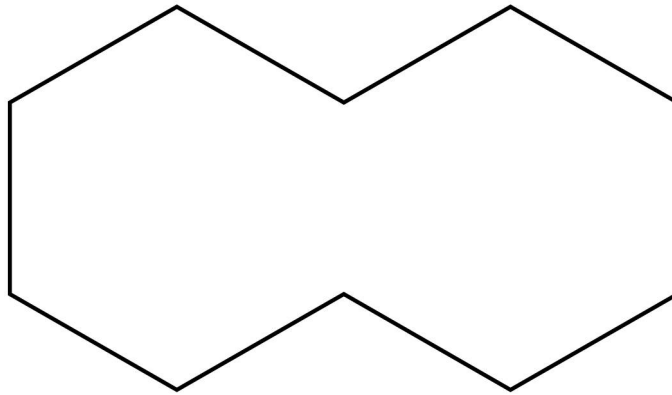
Line Master 4



Name: _____



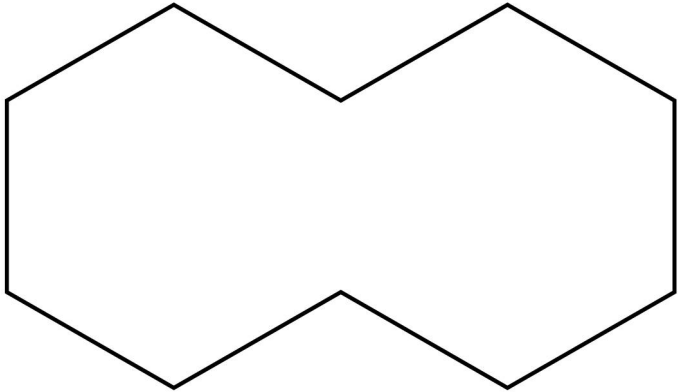
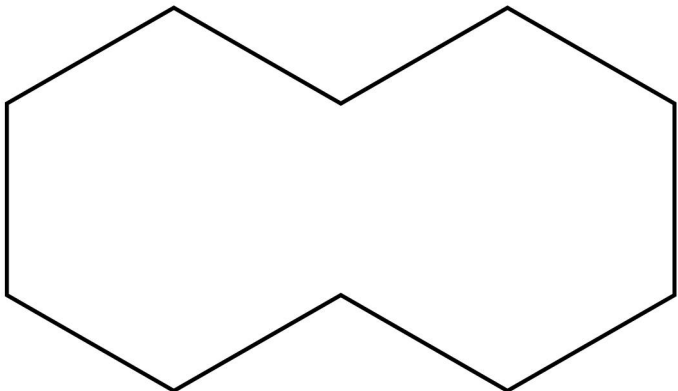
Name: _____



Equal Parts Recording Sheet

Line Master 5-1

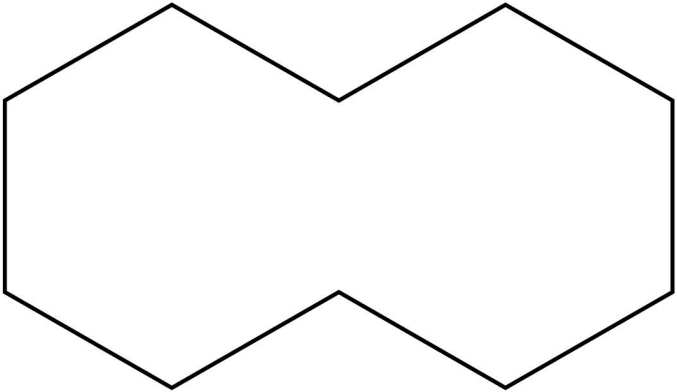
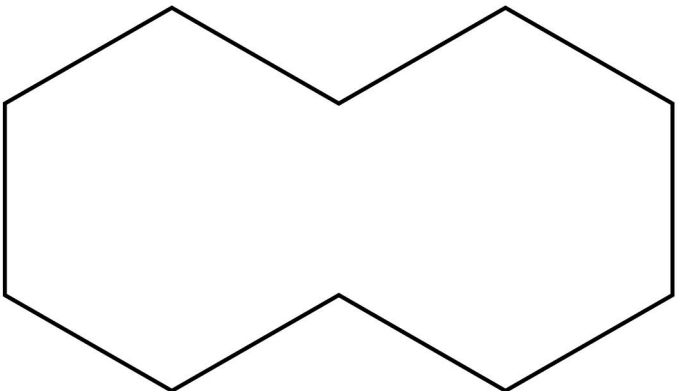
Name: _____

Picture	Number of Pattern Blocks	Name of the Equal Parts
		
		

Equal Parts Recording Sheet

Line Master 5-2

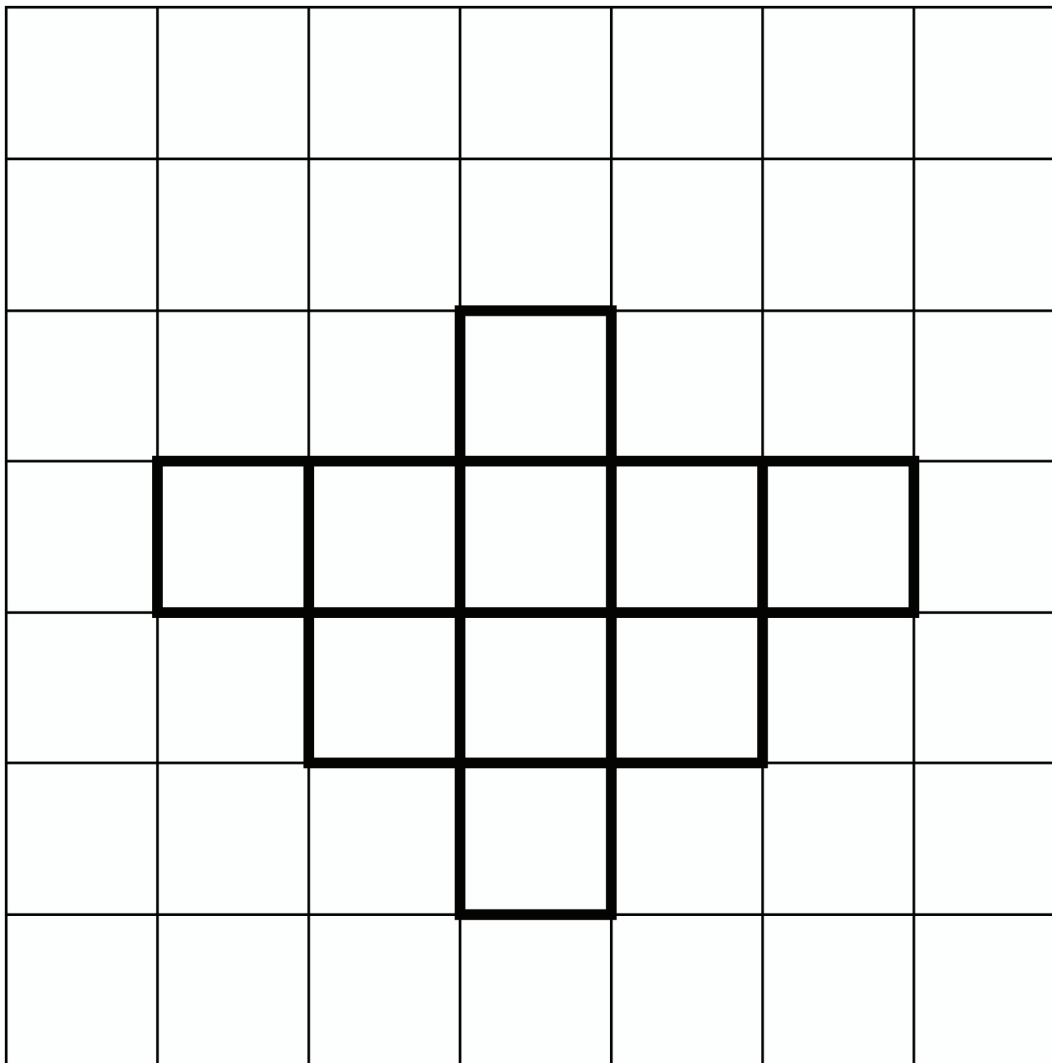
Name: _____

Picture	Number of Pattern Blocks	Name of the Equal Parts
		
		

My Logo

Line Master 6-1

Name: _____



My Logo

Line Master 6-2

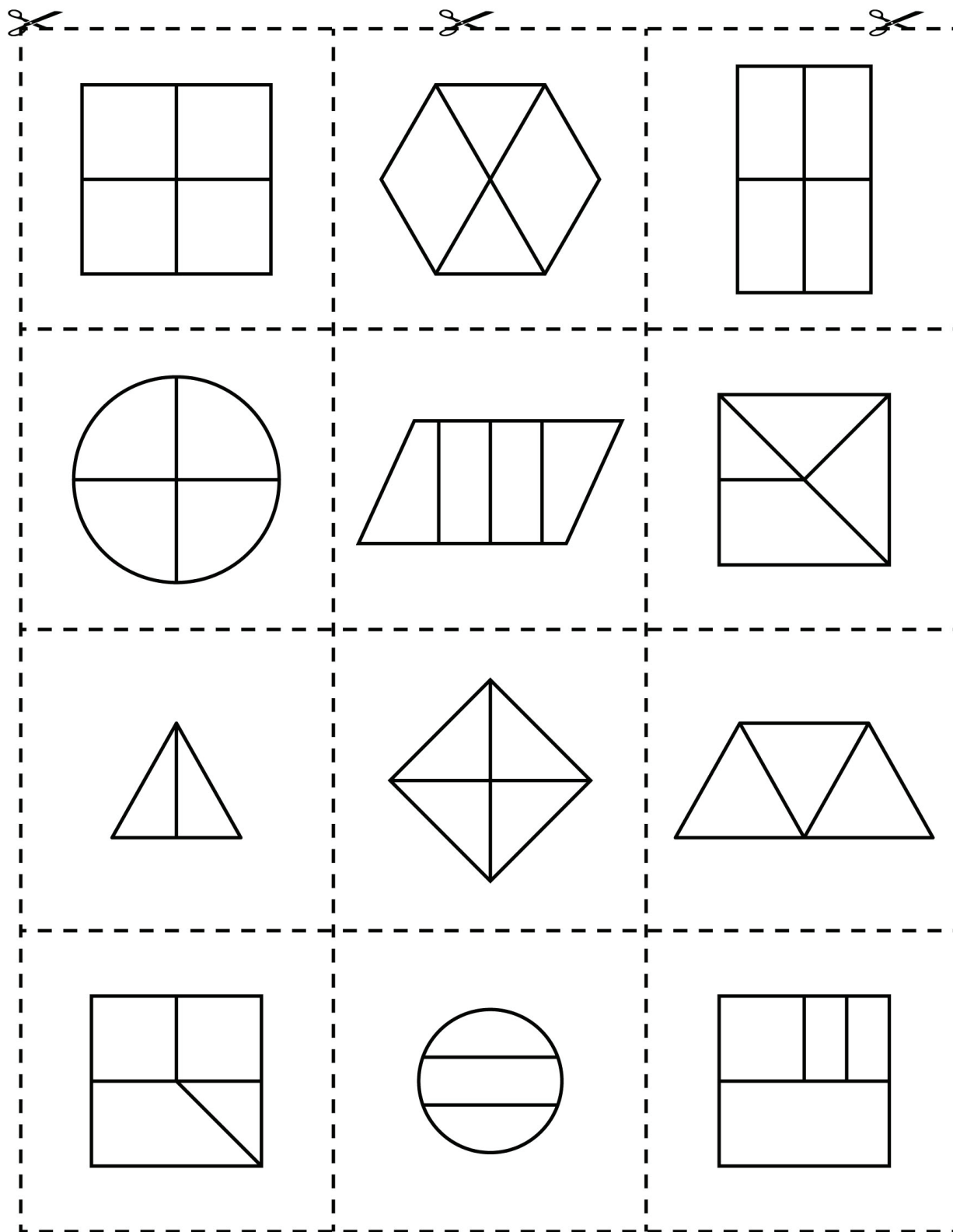
Name: _____

Colour	How many are this colour?	How can you represent this number as a fraction of the whole?

Pick any two fractions. Write the lesser fraction first and then the greater fraction.

Sorting Cards

Line Master 7



Sorting Mat

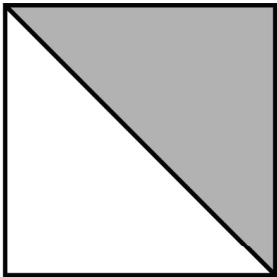
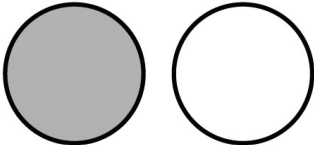
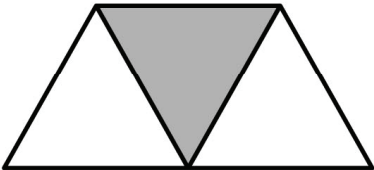
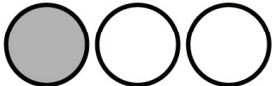
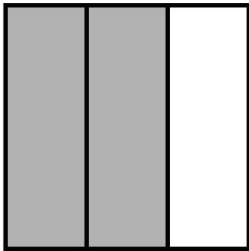
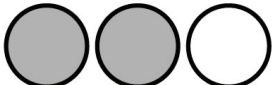
Line Master 8

Name: _____

Fractional Parts	Examples
halves	
thirds	
fourths	

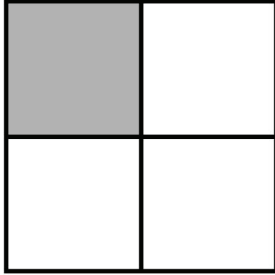

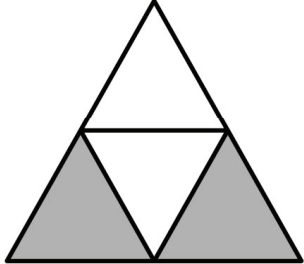

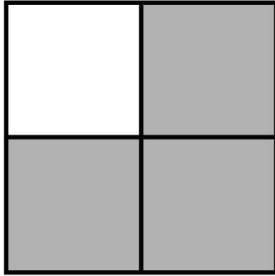
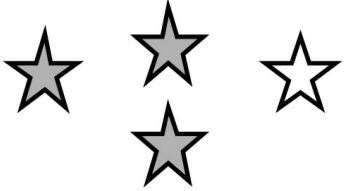
Fraction Match Cards

Line Master 9-1

<p>one-half</p>		
<p>one-third</p>		
<p>two-thirds</p>		

Fraction Match Cards

Line Master 9-2

<p>one-fourth</p>		
<p>two-fourths</p>		
<p>three-fourths</p>		

Discover Fractions

Line Master 10-1

Name: _____

Find rods that show the fractions. Then, draw the rods.

Fraction	My Drawing
one-half	<p>The _____ rod is _____ of the _____ rod.</p>
one-third	<p>The _____ rod is _____ of the _____ rod.</p>
one-fourth	<p>The _____ rod is _____ of the _____ rod.</p>

Discover Fractions

Line Master 10-2

Name: _____

Find rods that show the fractions. Then, draw the rods.

Fraction	My Drawing
one-fifth	<p>The _____ rod is _____</p> <p>of the _____ rod.</p>
one-tenth	<p>The _____ rod is _____</p> <p>of the _____ rod.</p>

Writing About Fractions

Line Master 11

✂ -----

Where do we use fractions? List as many places as you can.

✂ -----

Suppose you were sharing a chocolate bar with 2 friends.
How would you share it fairly?

✂ -----

Imagine sharing a treat. Your share is one-fifth. Is your share more than or less than a one-fourth share? Use words and drawings to explain.

✂ -----

Could one-third ever be greater than one-half? Use drawings and words to show your ideas.

✂ -----

Write 2 important things you have learned about fractions.
Explain why it is important to know these things.

✂ -----

Fraction Problems

Line Master 12-1



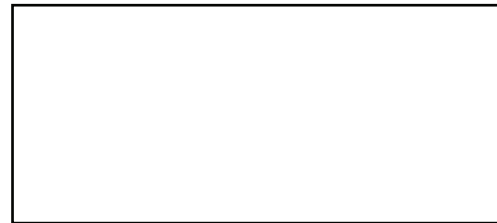
Draw a flag that fits the fractions.

two-thirds yellow
one-third blue

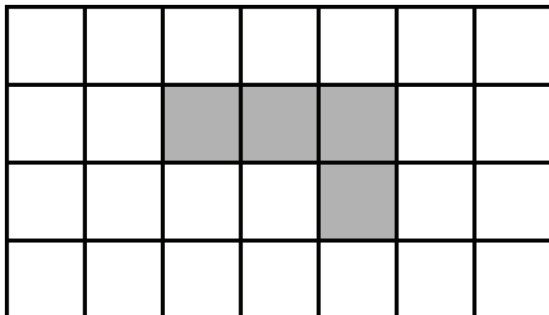


Draw a flag that fits the fractions.

one-fourth green
one-fourth orange
two-fourths white

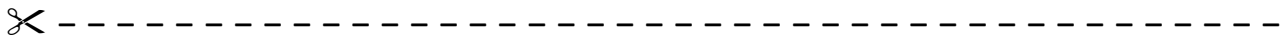


This shape is one-half of a larger shape. Using grid paper, draw as many different shapes as you can that might be the larger shape.

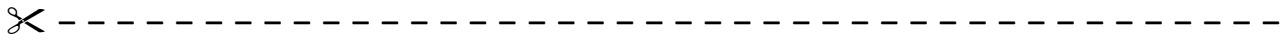


Fraction Problems

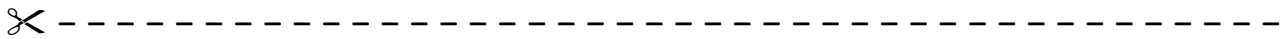
Line Master 12–2



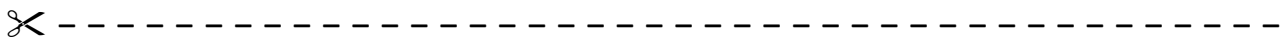
Imagine sharing a treat. Do you get a bigger piece when you share with many friends or a few friends? Use pictures to explain why your answer makes sense.



On Friday, the Bearcats hockey team practised for seven-twelfths of an hour, and the Bulldogs practised for nine-twelfths of an hour. Which team spent more time practising? How do you know?



There are 4 red pucks and 2 black pucks left on the ice.
What fraction of the pucks are black?
Use counters if they help. Draw a picture to show your solution.



Use rods to find the answer to each question.

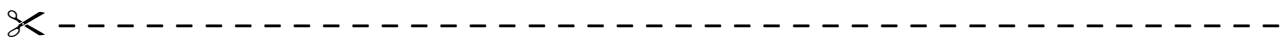
Which rod is one-half of the dark green rod?

Which rod is one-fourth of the brown rod?

Which rod is one-third of the blue rod?

Which rod is one-fifth of the orange rod?

Which rod is one-half of the orange rod?



Namir's Marvellous Masterpieces

Line Master 1 (Assessment Master)

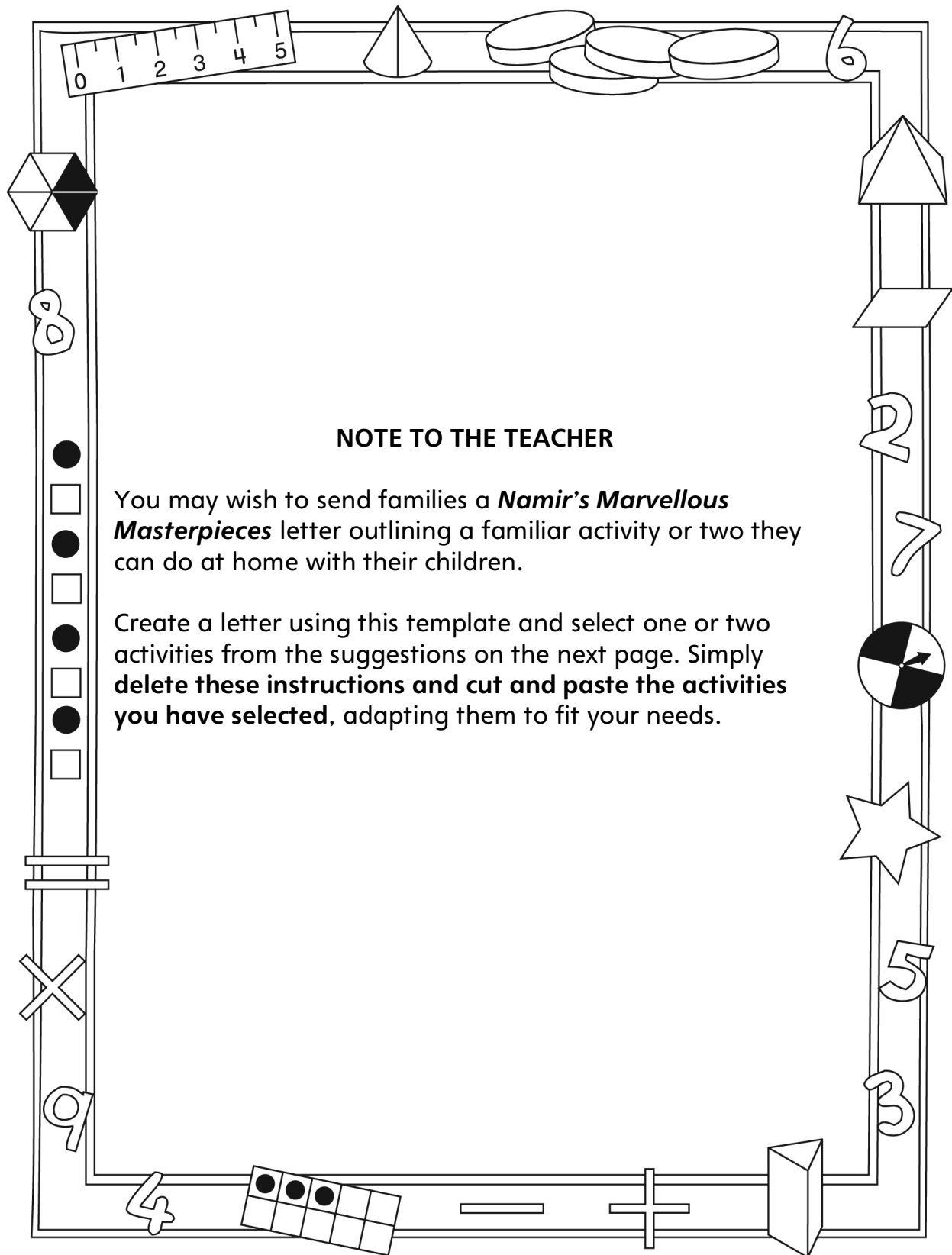
Name: _____

Investigate Growing and Shrinking Patterns (Further Developed)	Not observed	Sometimes	Consistently
Creates increasing/decreasing patterns			
Describes increasing/decreasing pattern			
Extends number patterns			
Finds missing elements in number patterns			
Use Equations to Represent Growing and Shrinking Patterns			
Generalizes and explains the rule for arithmetic patterns (including the starting point and change)			
Writes one-step addition and subtraction equations to match a pattern rule			

Strengths:

Next Steps:

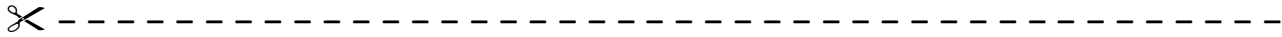
Connecting Home and School Line Master 2-1



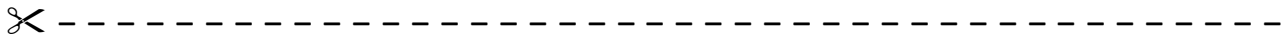
Connecting Home and School Line Master 2–2

Dear Family:

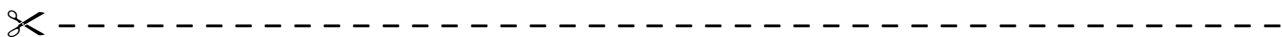
We have been working on *Namir’s Marvellous Masterpieces*, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Patterns can be described mathematically.” Particular focus is placed on describing, extending, and creating growing and shrinking patterns, and on using equations to represent growing and shrinking patterns. Try this activity at home with your child.



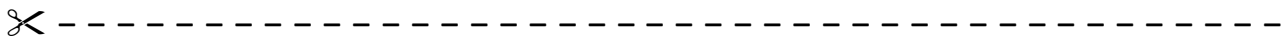
Reading the Story: As you read the story, explore the patterns with your child and invite him/her to predict the next terms. After you read, you might gather some small objects, such as different coloured beans or buttons, and use the Math Mat (inside back cover of the book) to help you and your child create repeating, growing, and shrinking patterns.



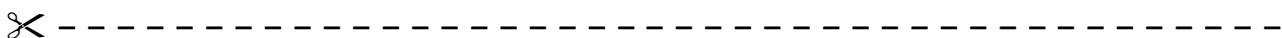
Pattern Walk: Take a walk outside with a pencil and notepad, and record all the patterns you see. You could also look for patterns inside. Challenge your child to see who can find more patterns. Play again, but this time, look only for growing or shrinking patterns.



Money Patterns: Invite your child to use nickels and dimes to create growing and shrinking money patterns. For the first round, use only dimes or only nickels, so that the total goes up (or down) by only 10 or 5. Then, encourage your child to use both coins to create patterns. You can try to guess the pattern rule or keep extending the pattern. Repeat, but this time you create the pattern and have your child give the pattern rule or extend it.



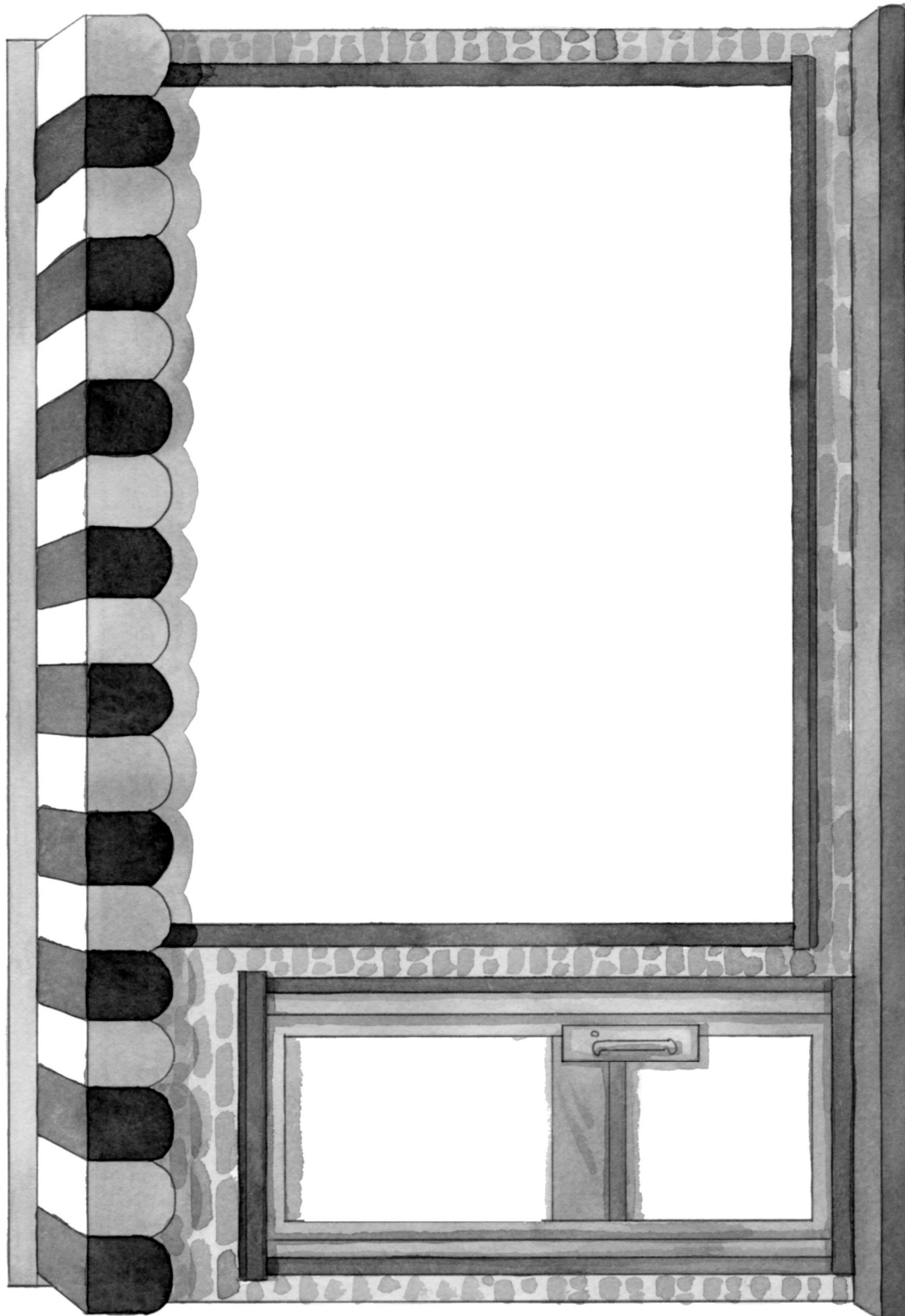
Toothpick Designs: Create a growing or shrinking pattern with your child using toothpicks. When the pattern is finished, ask your child to state the pattern rule. For an additional challenge, create a pattern without showing it to your child and then remove part of it (a middle section). Challenge your child to fill in the missing part.



Sincerely,

Namir's Marvellous Masterpieces Math Mat

Line Master 3



Hundred Charts

Line Master 4-1

Name: _____

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Hundred Charts

Line Master 4-2

Name: _____

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

Hundred Charts

Line Master 4-3

Name: _____

201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300

Hundred Charts

Line Master 4-4

Name: _____

301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370
371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400

Hundred Charts

Line Master 4-5

Name: _____

401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500

Hundred Charts

Line Master 4–6

Name: _____

501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520
521	522	523	524	525	526	527	528	529	530
531	532	533	534	535	536	537	538	539	540
541	542	543	544	545	546	547	548	549	550
551	552	553	554	555	556	557	558	559	560
561	562	563	564	565	566	567	568	569	570
571	572	573	574	575	576	577	578	579	580
581	582	583	584	585	586	587	588	589	590
591	592	593	594	595	596	597	598	599	600

Hundred Charts

Line Master 4–7

Name: _____

601	602	603	604	605	606	607	608	609	610
611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630
631	632	633	634	635	636	637	638	639	640
641	642	643	644	645	646	647	648	649	650
651	652	653	654	655	656	657	658	659	660
661	662	663	664	665	666	667	668	669	670
671	672	673	674	675	676	677	678	679	680
681	682	683	684	685	686	687	688	689	690
691	692	693	694	695	696	697	698	699	700

Hundred Charts

Line Master 4–8

Name: _____

701	702	703	704	705	706	707	708	709	710
711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740
741	742	743	744	745	746	747	748	749	750
751	752	753	754	755	756	757	758	759	760
761	762	763	764	765	766	767	768	769	770
771	772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789	790
791	792	793	794	795	796	797	798	799	800

Hundred Charts

Line Master 4-9

Name: _____

801	802	803	804	805	806	807	808	809	810
811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830
831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850
851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870
871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890
891	892	893	894	895	896	897	898	899	900

Hundred Charts

Line Master 4–10

Name: _____

901	902	903	904	905	906	907	908	909	910
911	912	913	914	915	916	917	918	919	920
921	922	923	924	925	926	927	928	929	930
931	932	933	934	935	936	937	938	939	940
941	942	943	944	945	946	947	948	949	950
951	952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969	970
971	972	973	974	975	976	977	978	979	980
981	982	983	984	985	986	987	988	989	990
991	992	993	994	995	996	997	998	999	1000

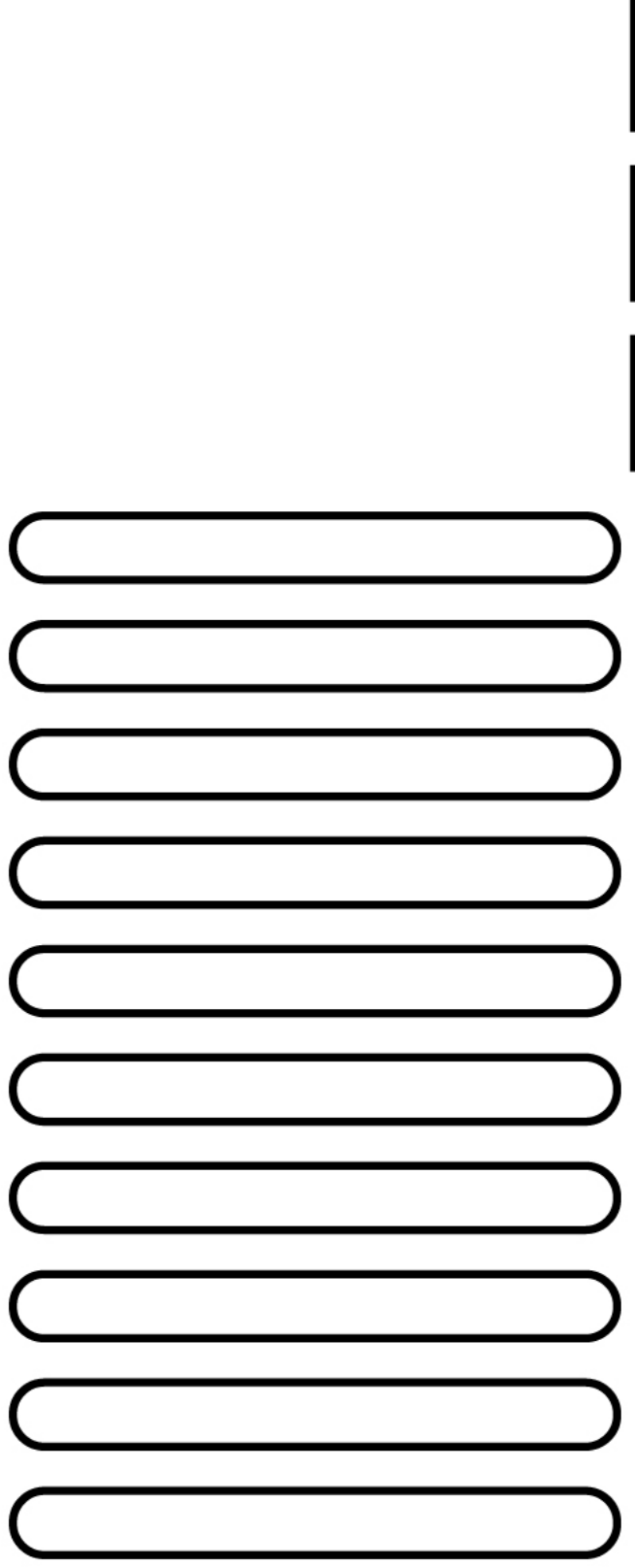
Pattern Scramble

Line Master 5-1

Name: _____

Circle the pattern type: growing shrinking

Record your pattern. Then, add 3 more terms (craft sticks).



Pattern Scramble

Line Master 5--2

Name: _____

Write the pattern rule.

Write equations to represent your pattern.

Pattern Hunt

Line Master 6

Name: _____

Type of pattern: _____

Sketch:

Pattern rule:

Equations:

Tree Patterns

Line Master 7

Name: _____

Tree Number	Number of Blocks I Added	Total Number of Blocks in My Tree	Equation
1			
2			
3			
4			
5			
6			
7			
8			

Roll a Pattern Rule

Line Master 8




Name: _____

1. Roll 2 number cubes to make a 2-digit number. This is your starting number.
2. Choose a Pattern Rule Card to find out if your pattern will be growing or shrinking.
3. Roll 1 number cube to tell you what number to use in your pattern rule.
4. Complete the table. The first row shows an example.

Starting Number (1st Term)	Growing or Shrinking	Pattern Rule	2nd Term	3rd Term	4th Term	5th Term	6th Term
26	growing	add 4	30	34	38	42	46

Pattern Rule Cards

Line Master 9

 shrinking	 shrinking	 shrinking
growing	growing	growing

People Patterns

by

At the start of the day, 1 person comes in the store.

Altogether, there are

in the store.

_____ more come in the store.

Now there are

in the store.

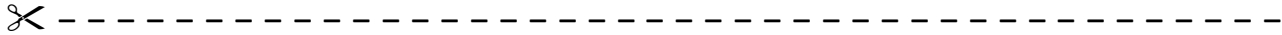
_____ more come in the store.

Now there are

in the store.

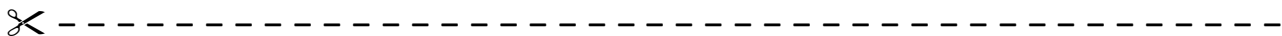
Pattern Problems

Line Master 11-1



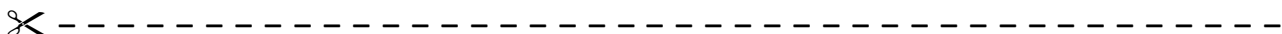
Namir is biking to his family's store, which is 5 blocks away. If it takes him 2 minutes to bike 1 block, how long will it take him to get to the store?

Number of Blocks	Number of Minutes
1	2



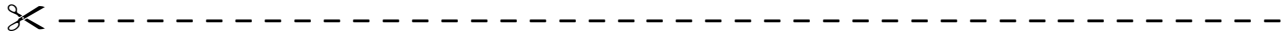
Naia saves 4 quarters each day she works at the store. If she works 6 days, how many quarters will she have saved?

Number of Days	Number of Quarters Saved
1	4



Pattern Problems

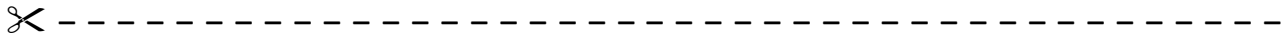
Line Master 11–2



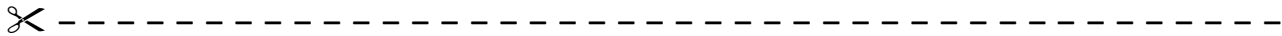
Naia gives her brother these numbers: 150, 125, 100, 75.

What is the pattern rule?

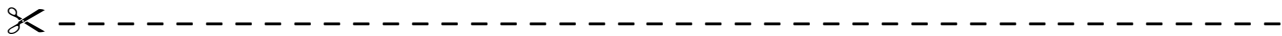
What are the next 2 terms of this pattern?



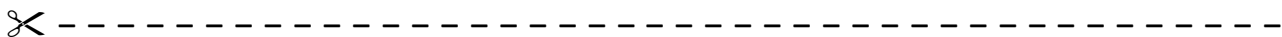
A delivery truck brought 5 loaves of bread to the family store on Monday, 16 loaves of bread on Tuesday, and 27 loaves of bread on Wednesday. If this pattern continues, how many loaves of bread will be delivered on Thursday and Friday?



Namir sold 7 sandwiches on Thursday, 14 sandwiches on Friday, and 21 sandwiches on Saturday. If this pattern continues, how many sandwiches will Namir sell on Sunday and Monday?

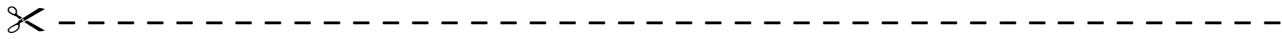


Naia sold 15 boxes of dog treats during the first week of the month. She sold 25 boxes the next week and 35 the following week. If this pattern continues, how many boxes of dog treats will she sell in the next 2 weeks?

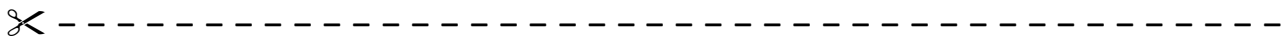


Pattern Problems

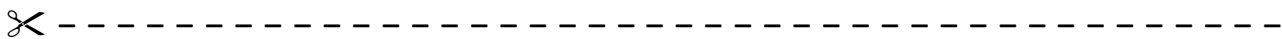
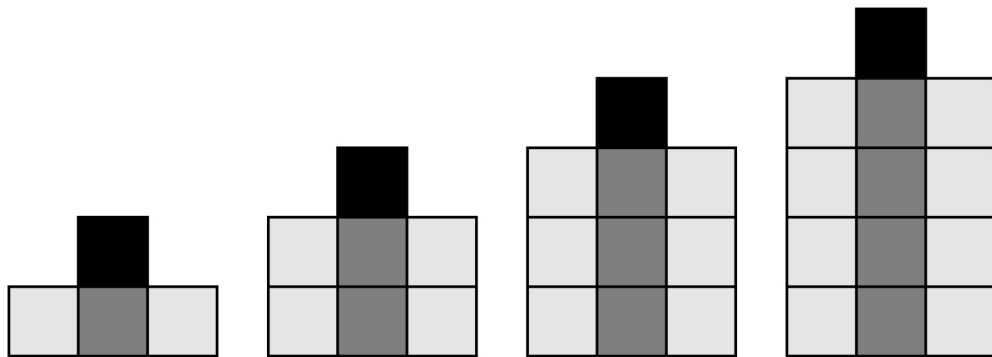
Line Master 11–3



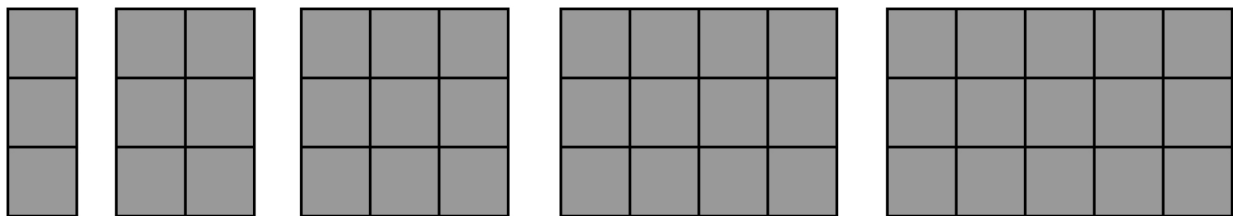
In the early winter, Namir’s family sells gingerbread cookies. The first week, they sell 10 cookies. The next week, the sales double. The third week, the sales double again. How many cookies do they sell during the second and third weeks?



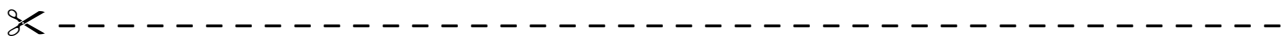
Naia made this pattern out of cereal boxes at the store. What would be the next 2 terms of this pattern?



Naia decides to make another pattern. It looks like this:



What would be the next 3 terms of this pattern?



A Week of Challenges

Line Master 1 (Assessment Master)

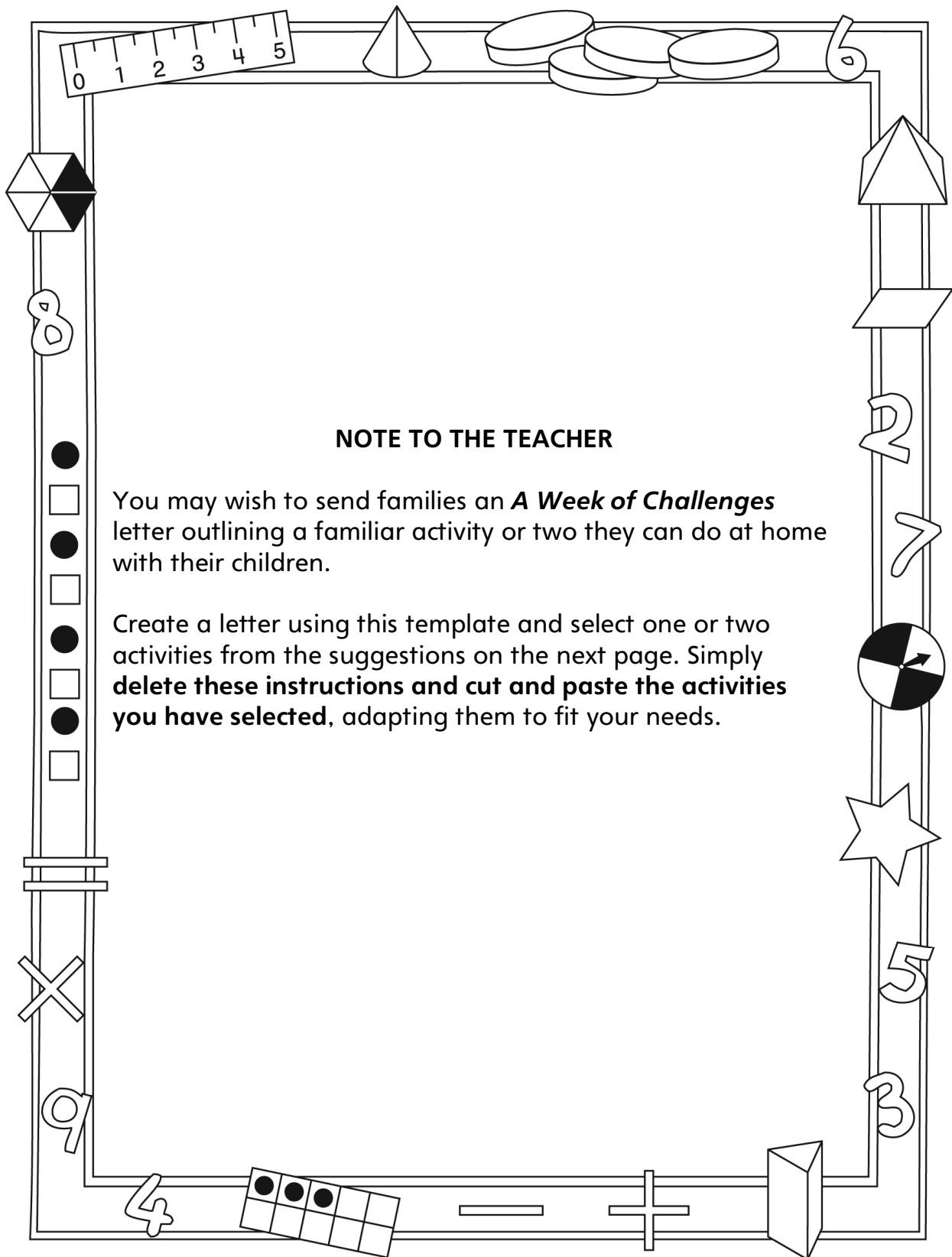
Name: _____

Use Properties of Equality to Solve Problems	Not observed	Sometimes	Consistently
Investigates addition and subtraction as inverse operations			
Balances sides of an equation using different strategies			
Finds missing addends and subtrahends to solve equations			
Solves different problem types (start, change, or result unknown)			
Use the Language of Algebra			
Uses placeholders for unknown values in equations			
Solves for an unknown value in a one-step addition and subtraction problem (e.g., $\square + 5 = 15$)			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

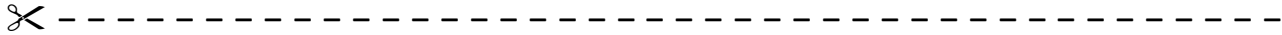
You may wish to send families an *A Week of Challenges* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

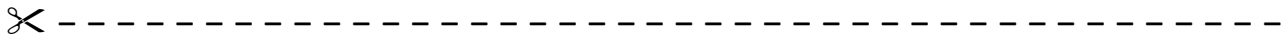
Connecting Home and School Line Master 2–2

Dear Family:

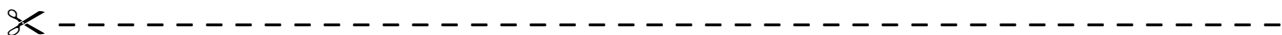
We have been working on ***A Week of Challenges***, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Symbols and expressions can be used to represent mathematical relations.” Particular focus is placed on finding the unknown in addition and subtraction equations, and on writing equations using a symbol to represent an unknown. Try this activity at home with your child.



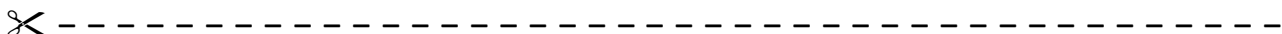
Reading the Story: As you read the story together, take turns writing addition and subtraction problems based on the action in the story. Write an equation for the problem, using a symbol such as a shape (e.g., a square or triangle) to represent the unknown. Then, encourage your child to take the lead and show you how to solve the problem.



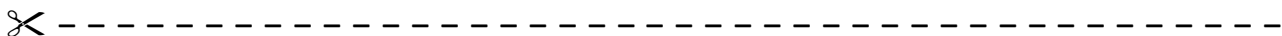
What’s the Score?: When watching a sporting event, ask your child problems that involve equality, such as: **How many more points do the (losing team’s name) need to tie? If the (winning team’s name) scored another (6) points, then how many points will the (losing team’s name) need to tie?** Work together to solve the problems.



What’s Missing?: You will need a collection of small items such as beans, chocolate chips, or marshmallows, and a bowl or mug. To start, count out a number of items, and hide some of them under the bowl or mug. Then, tell your child how many items you have in total. Invite him/her to figure out how many items are hidden.



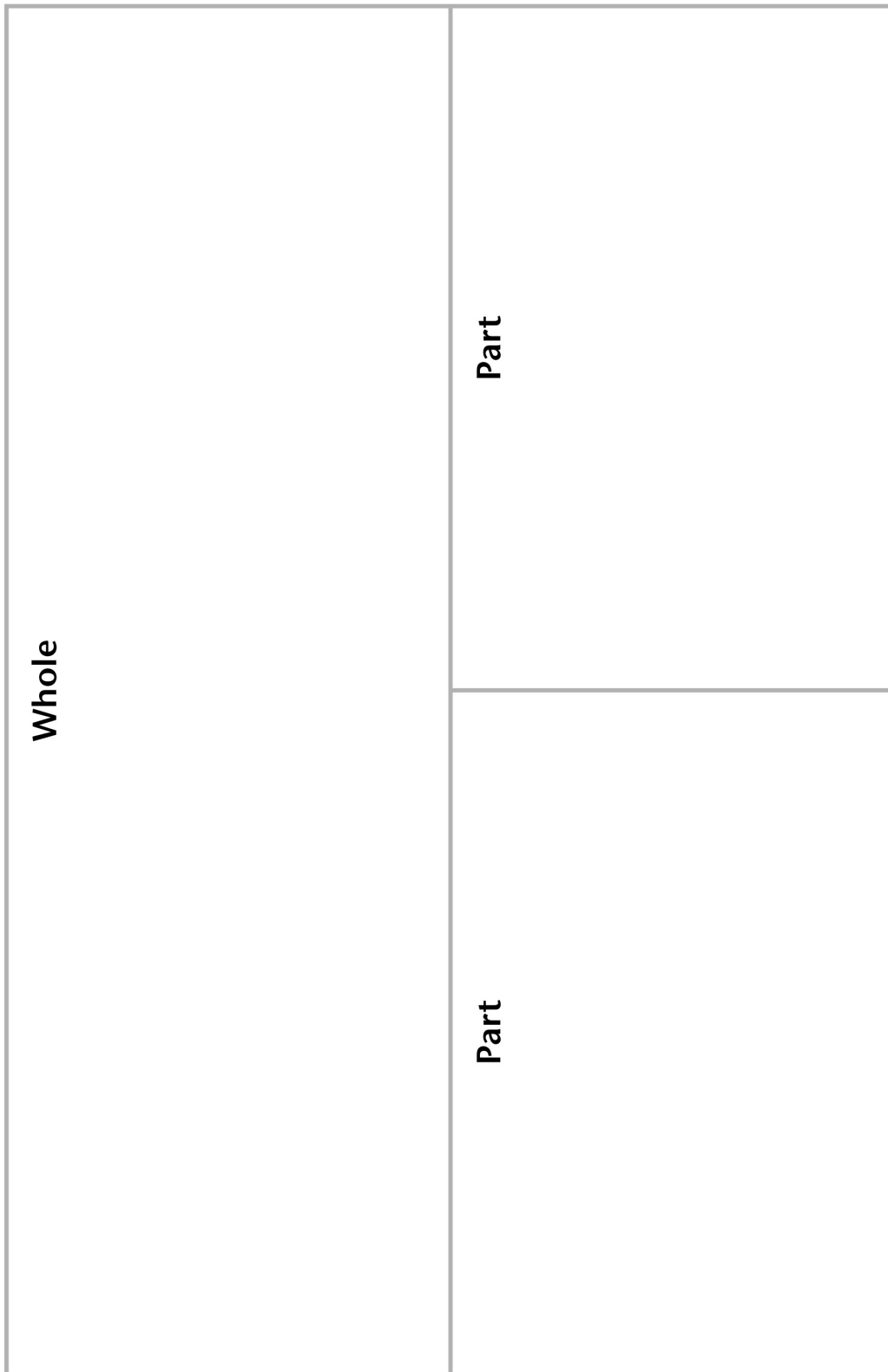
Magic Number Cube: You will need a number cube. Explain to your child that you have x-ray vision, so you can see what the number is on the bottom of the cube! Demonstrate by rolling the cube and taking note of the number you rolled. Don’t pick up the cube. To get the number on bottom, simply find the difference between the number you rolled and 7! Roll a few times to “prove” you have x-ray vision. Then, explain the trick to your child. Practise the trick with your child, and encourage him/her to wow friends and relatives with this superpower!



Sincerely,

A Week of Challenges Math Mat

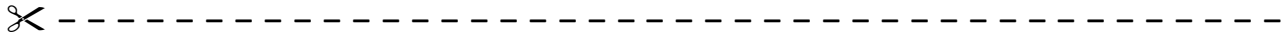
Line Master 3



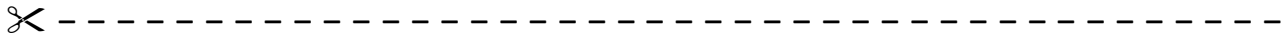
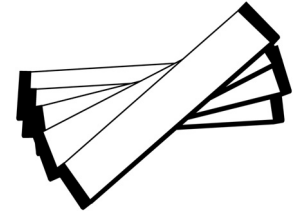
TRUE	FALSE
TRUE	FALSE
TRUE	FALSE
TRUE	FALSE
TRUE	FALSE
TRUE	FALSE

Problem Strips

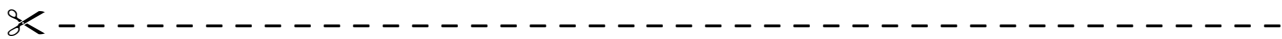
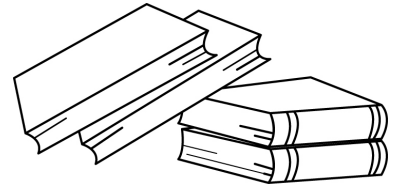
Line Master 5



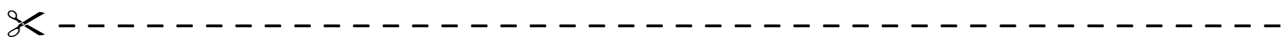
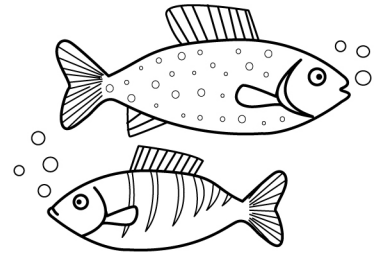
Sun had 15 pieces of gum. Her sister gave her some more. Now she has 22 pieces of gum. How many pieces did her sister give her?



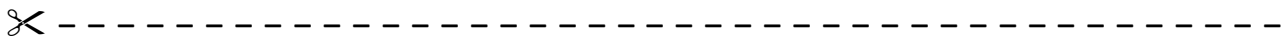
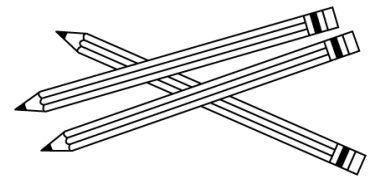
Anil had some books. He went to the library and got 5 more books. Now he has 14 books altogether. How many books did he have to start with?



There were 55 fish in the big tank. The pet shop owner moved some of them. Now there are only 40 fish in the big tank. How many fish did the shop owner move?



Ms. MacDonald had some pencils. She gave 10 of them away. Now she has 18 left. How many pencils did Ms. MacDonald have to begin with?





Number Cards

Line Master 6-1

0	1	2
3	4	5
6	7	8
9	10	11

 12	 13	 14
15	16	17
18	19	20
21	22	23

 24	25	26 
27	28	29
30	31	32
33	34	35

 36	 37	 38
39	40	41
42	43	44
45	46	47

 48	49	50
51	52	53
54	55	56
57	58	59

60	61	62
63	64	65
66	67	68
69	70	71




 72	 73	 74
75	76	77
78	79	80
81	82	83

84	85	86
87	88	89
90	91	92
93	94	95

Number Cards

Line Master 6-9

96	97	98
99	100	

$$3 + \diamond = 25$$
$$15 + \square = 22$$
$$12 + \triangle = 15$$
$$14 + \square = 20$$
$$16 + \diamond = 21$$
$$11 + \triangle = 19$$
$$2 + \diamond = 14$$

Planting Seeds

Line Master 8

Name: _____

Total Seeds	Seeds Above Ground	Seeds Below Ground (Planted)

Equation Match

Line Master 9-1




Word Problems

<p>Min has 15 cherries. She eats some and then she has 6 cherries. How many cherries did she eat?</p>	<p>Samuel has 6 hockey cards, but he would like to have 15 hockey cards. How many more hockey cards does he need?</p>
<p>Adnan has 15 markers, but 6 of them no longer work. How many markers does he have that work?</p>	<p>Some cookies are on a plate. There are 6 cookies in a jar and 15 cookies altogether. How many cookies are there on the plate?</p>

Equation Match

Line Master 9-2

Equation Cards

 $15 - 6 = \diamond$	 $\Delta + 6 = 15$ 
$15 - \diamond = 6$	$6 + \square = 15$
$6 + \Delta = 15$	$15 - 6 = \Delta$
$\square + 6 = 15$	$\square = 15 - 6$

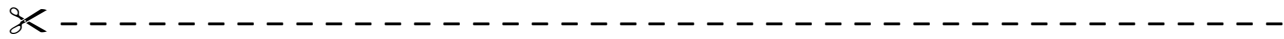
✂️ ----- ✂️ ----- ✂️

$7 + \square = 22 - 3$

$\triangle + 6 = 17 - 5$

$12 + 19 = \triangle - 12$

$33 - 17 = 14 + \hexagon$

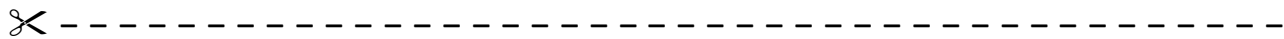


Ms. Mills put this equation on the board:

$$21 - 8 = \Delta$$

Sanjay said the answer was 12. Martin said the answer was 13. Is it possible that both boys' answers are correct?

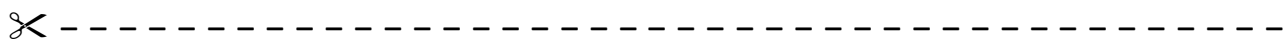
Why or why not?



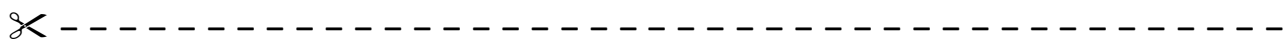
Solve this equation.

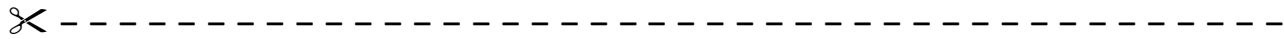
$$17 + 10 = \square + 4$$

Use drawings, numbers, and words to explain the strategies you used to figure it out.



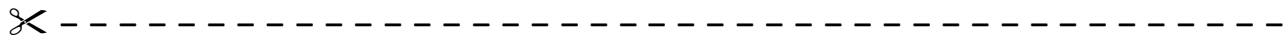
Aputik solved the equation $13 = 7 + \Delta$. She said that the answer was 20. Is she correct? Explain your answer using models, drawings, and/or words.



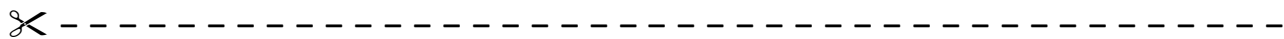


Write a story problem for this equation:

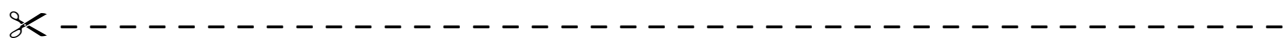
$$\Delta + 18 = 25$$



What is your favourite strategy for solving an addition equation? Can you always use it? Use words and numbers to explain.

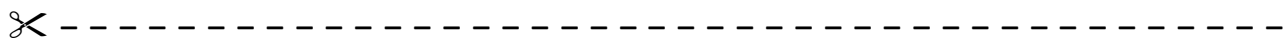


What is your favourite strategy for solving a subtraction equation? Can you always use it? Use words and numbers to explain.



Write a story problem for this equation:

$$35 - \Delta = 11$$



True/False Equation Sort

Line Master 12



$$16 + 18 = 18 + 16$$

$$9 + 1 = 6 + 5$$

$$21 + 10 = 21 - 10$$



$$1 + 13 = 13 - 1$$

$$21 + 0 = 12 + 0$$

$$80 - 20 = 30 + 30$$

$$16 + 26 = 8 + 34$$

$$50 + 50 = 100 - 0$$

$$13 + 9 = 15 + 7$$

Goat Island

Line Master 1 (Assessment Master)

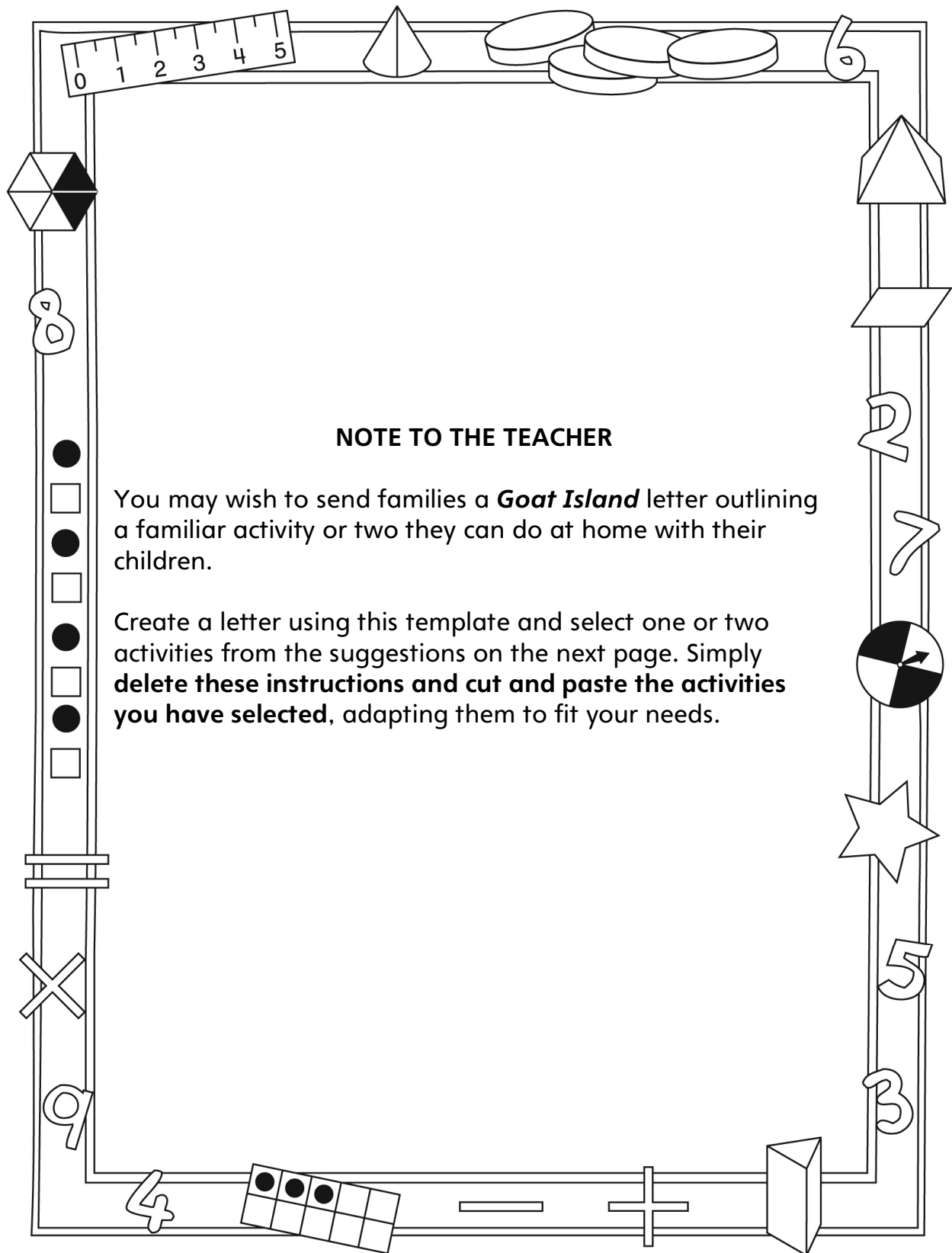
Name: _____

Measure Time, Temperature, and Length	Not observed	Sometimes	Consistently
Estimates, measures, and describes the passage of time			
Uses standard and non-standard units of length			
Relates temperatures to experiences of the seasons			
Identifies benchmarks for temperature			
Explore Units of Measure and Their Relationships			
Relates number of days to a week, and number of months to a year in a problem-solving context			
Compares non-standard units of length to standard units			
Uses the measurement of familiar objects as benchmarks to estimate another measure in standard units			

Strengths:

Next Steps:

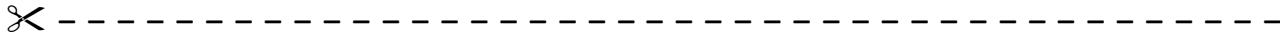
Connecting Home and School Line Master 2-1



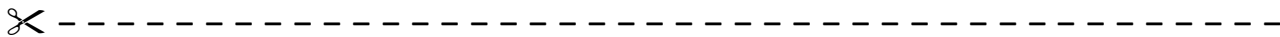
Connecting Home and School Line Master 2-2

Dear Family:

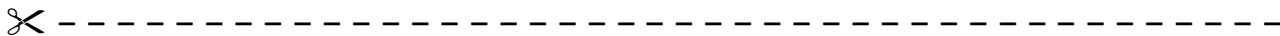
We have been working on **Goat Island**, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Units can be used to measure and compare attributes.” Particular focus is placed on measuring time, temperature, and length, as well as understanding the relationship between units of measure. Try this activity at home with your child.



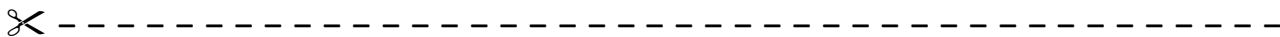
Reading the Story: As you read the story, encourage your child to identify the changes in nature over time. Invite your child to estimate different measurements and make connections to her/his own life. Encourage your child to compare temperatures and predict what will happen each season.



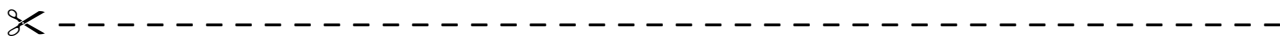
How Much Time?: Encourage your child to figure out how long parts of her/his daily routine take and/or how long different activities last. For example, how many songs can he/she listen to on the way to school? Which takes longer, eating dinner or watching an episode of a favourite television show? Challenge your child to develop personal benchmarks for measuring time.



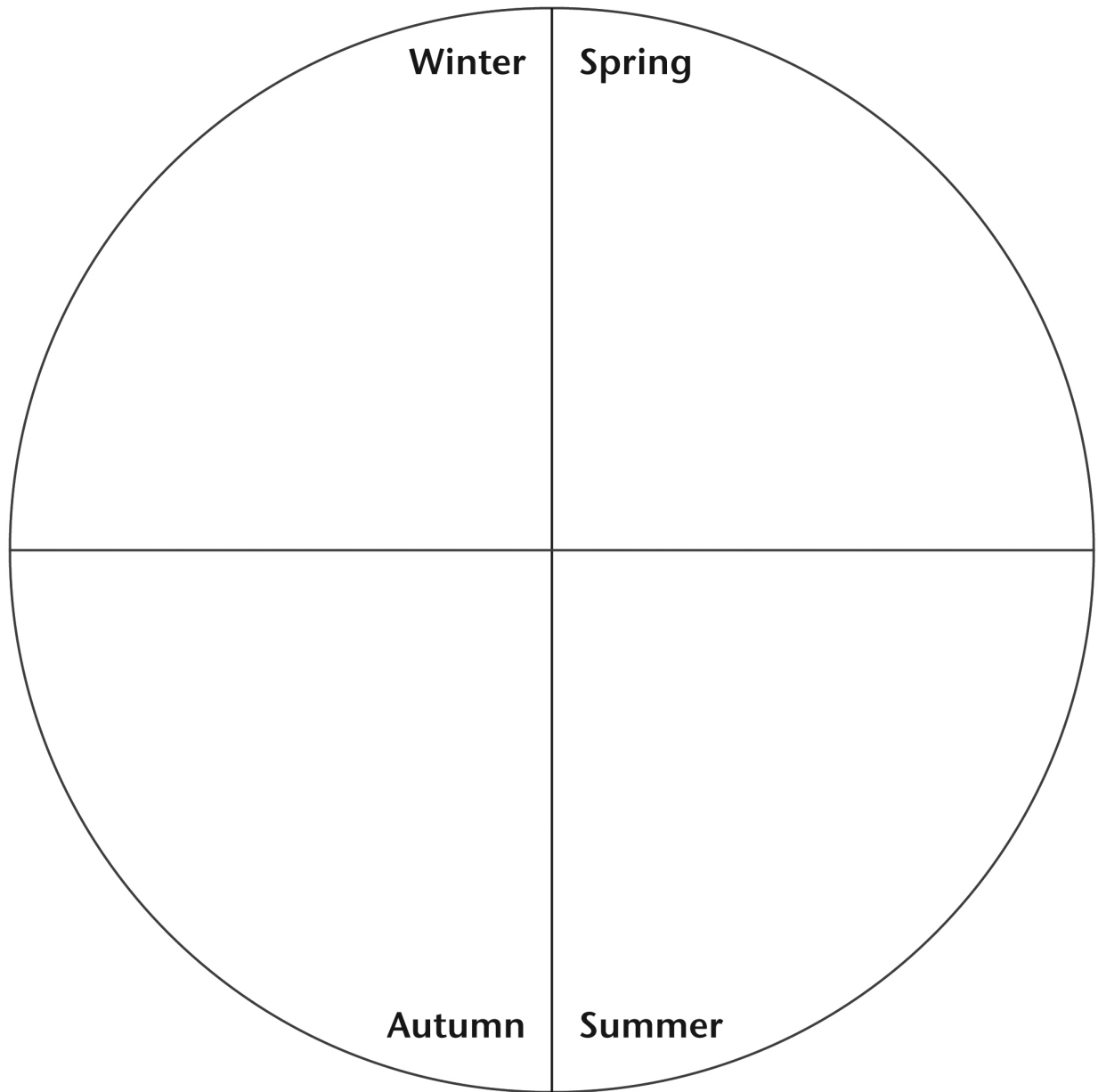
Measuring Temperature: Review the weather forecast with your child. Encourage your child to keep a daily record of the temperature in the morning and evening. Challenge your child to use the information to predict upcoming temperatures and weather conditions.



Finding Similar Lengths: Invite your child to choose a household object to estimate the length of and then measure. Challenge your child to find other objects with similar lengths and compare them.



Sincerely,



What's the Temperature?

Line Master 4

Name: _____

City: _____

Date	Temperature and Weather Conditions		
	Morning	Afternoon	Evening
Today:			
Tomorrow:			

Suggested clothing: _____

Notes: _____

My Calendar

Line Master 5-1

Name: _____

January	February	March
---------	----------	-------

April	May	June
-------	-----	------

July	August	September
------	--------	-----------

October	November	December
---------	----------	----------

My Calendar

Line Master 5-2

Name: _____

September	October	November
-----------	---------	----------

December	January	February
----------	---------	----------

March	April	May
-------	-------	-----

June	July	August
------	------	--------

Measuring Shadows

Line Master 6



Name: _____

Date	Time of Day	Length of Shadow



Name: _____

Date	Time of Day	Length of Shadow



Weekly Calendar

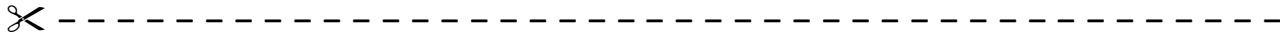
Line Master 7

Name: _____

	Monday	Tuesday	Wednesday	Thursday	Friday
Temperature Inside					
Temperature Outside					

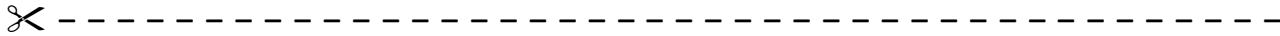
Measuring Snow

Line Master 8



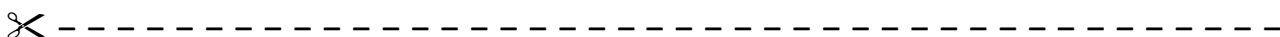
Name: _____

I am measuring the height of...	Estimate	Actual Height
snow up to my ankles		
snow up to my knees		
snow up to my waist		



Name: _____


I am measuring the height of...	Estimate	Actual Height
snow up to my ankles		
snow up to my knees		
snow up to my waist		



Memory Cards

Line Master 9-1




Temperature Set

 stays cold	 Winter 
getting warmer	Spring
stays warm	Summer
getting cooler	Autumn

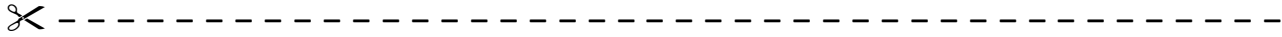
Memory Cards

Line Master 9-2

Time Set

 3 seconds	 taking a deep breath	
15 seconds	saying the alphabet	
2 minutes	brushing your teeth	
15 minutes	morning recess	
30 minutes	eating dinner	
3 hours	a game of baseball	

Exploring Similar Measurements



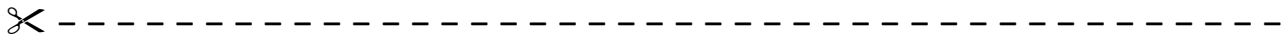
Name: _____

My object is _____.

The unit of measure I am using is _____.

It measures _____.

Object	Estimated Measurement	Actual Measurement



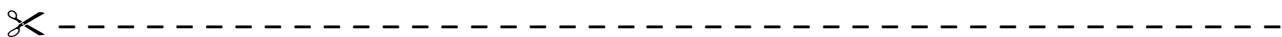
Name: _____

My object is _____.

The unit of measure I am using is _____.

It measures _____.

Object	Estimated Measurement	Actual Measurement



Weather Report

Line Master 11

Name: _____

Temperature

Season

What to wear

Tomorrow's forecast

Measurement Problems

Line Master 12-1



The tree's shadow is equal to 3 of my giant steps.

That is about 3 m long.

How long is 1 of my giant steps?

Show how you know.



The tree's shadow is equal to 8 of my footsteps.

That is about 4 m long.

How long is 1 of my footsteps?

Show how you know.



Measurement Problems

Line Master 12-2



Suppose you were to go on a trip for 2 weeks.

How many days would you be away?

Show how you know.



Suppose you were to go on a trip for 2 months.

About how many days would you be away?

Show how you know.



The Bunny Challenge

Line Master 1 (Assessment Master)

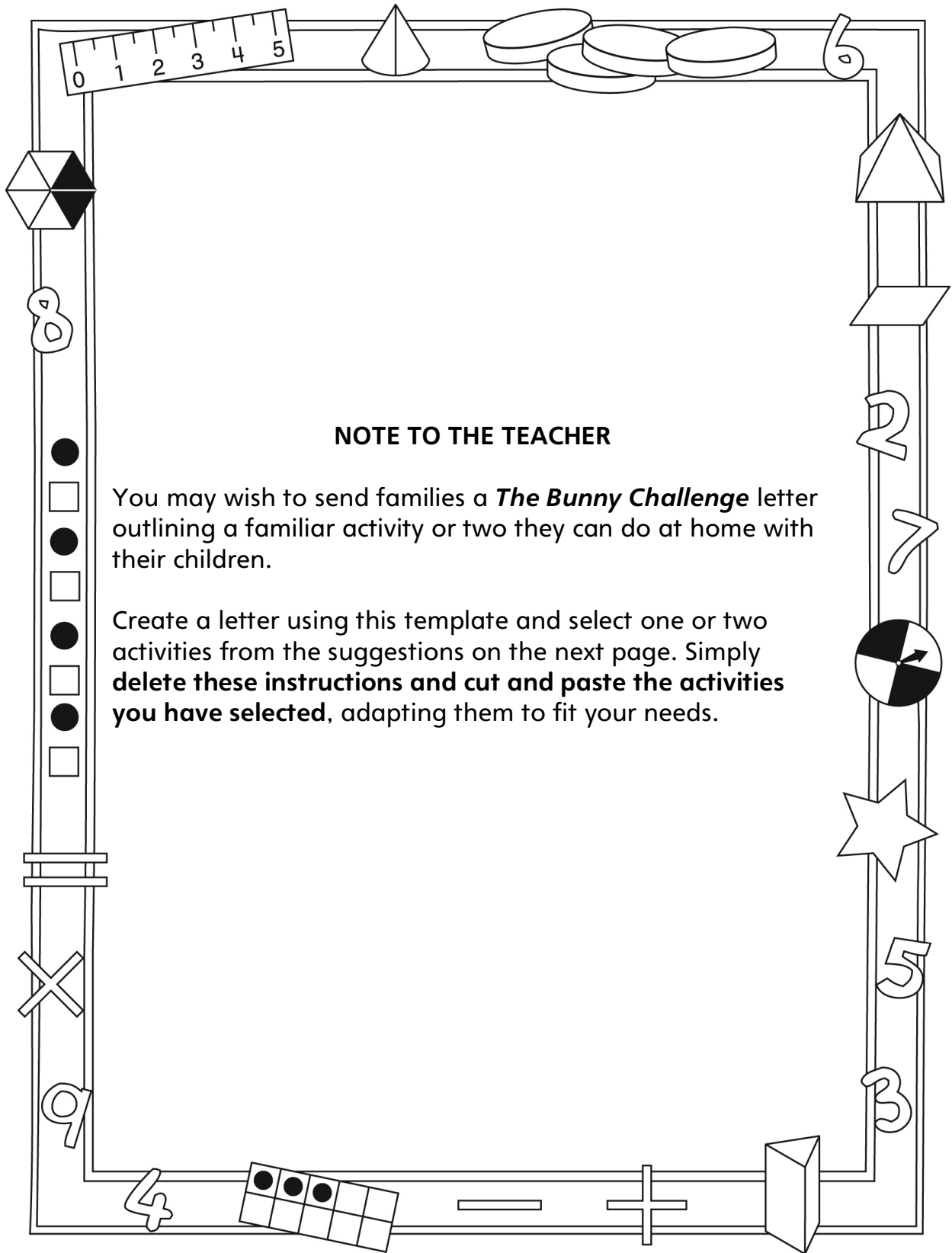
Name: _____

Estimate, Measure, and Compare Area	Not observed	Sometimes	Consistently
Demonstrates ways to estimate area with non-standard units			
Demonstrates ways to measure area with non-standard units			
Demonstrates ways to compare and order objects by area with non-standard units			
Selects and uses appropriate non-standard units to estimate, measure, and compare area			
Estimate, Measure, and Compare Perimeter			
Demonstrates ways to estimate perimeter with standard units			
Demonstrates ways to measure perimeter with standard units			
Demonstrates ways to compare and order objects by perimeter with standard units			
Selects and uses appropriate standard units to estimate, measure, and compare perimeter			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

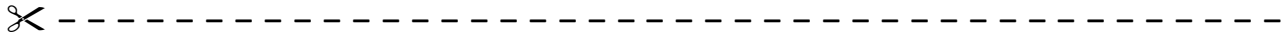
You may wish to send families a *The Bunny Challenge* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

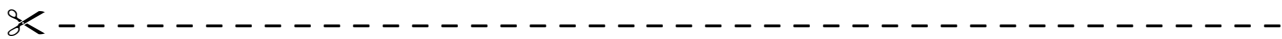
Connecting Home and School Line Master 2–2

Dear Family:

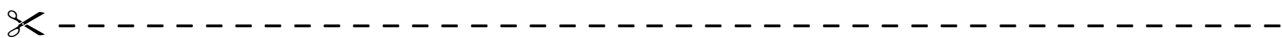
We have been working on *The Bunny Challenge*, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Units can be used to measure and compare attributes.” Particular focus is placed on estimating, comparing, and measuring area and perimeter of objects. Try this activity at home with your child.



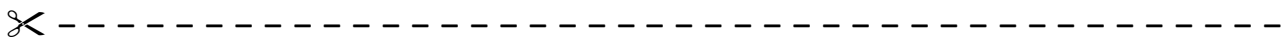
Reading the Story: As you read the story, enjoy predicting the perimeter and area of the various bunny home designs. Try to estimate which home will have the greatest area and the least area space.



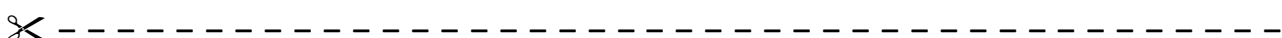
Bunny Homes: Invite your child to predict whether the bunny homes on the Math Mat (inside back cover of the book) have the same or different perimeters. Then, work together to measure the perimeters of all the homes (the lengths of all the sides added together) in centimetres to check. Repeat, but for the areas of the homes. Fill the bunny homes with squares (e.g., with square sticky notes or by covering them with grid paper), and then count them to find the area.



Missing Sides: Draw a shape with straight sides and 1 side missing (e.g., draw only 3 sides of a rectangle). Measure the perimeter of the completed shape in centimetres. Tell your child the perimeter and ask her/him to tell you the length of the missing side. Complete the shape and encourage your child to measure to check his/her answer. For the next round, have your child draw a shape with a missing side, and then measure and tell you the perimeter of the completed shape.



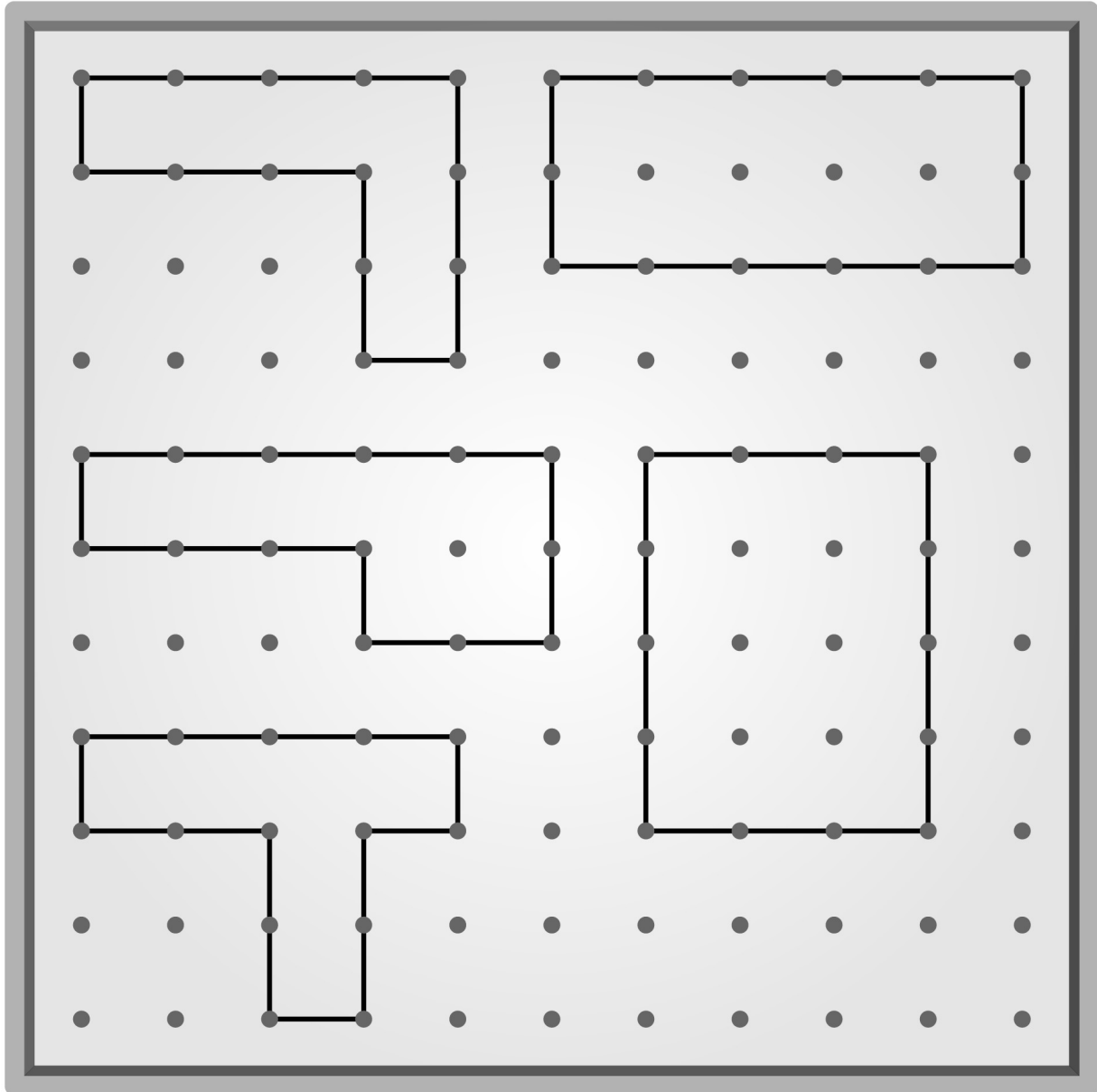
My Bunny Home: Use square building blocks to build a bunny home with your child. Ask your child to show you how to use the blocks to find the perimeter and area of the home.



Sincerely,

The Bunny Challenge Math Mat

Line Master 3

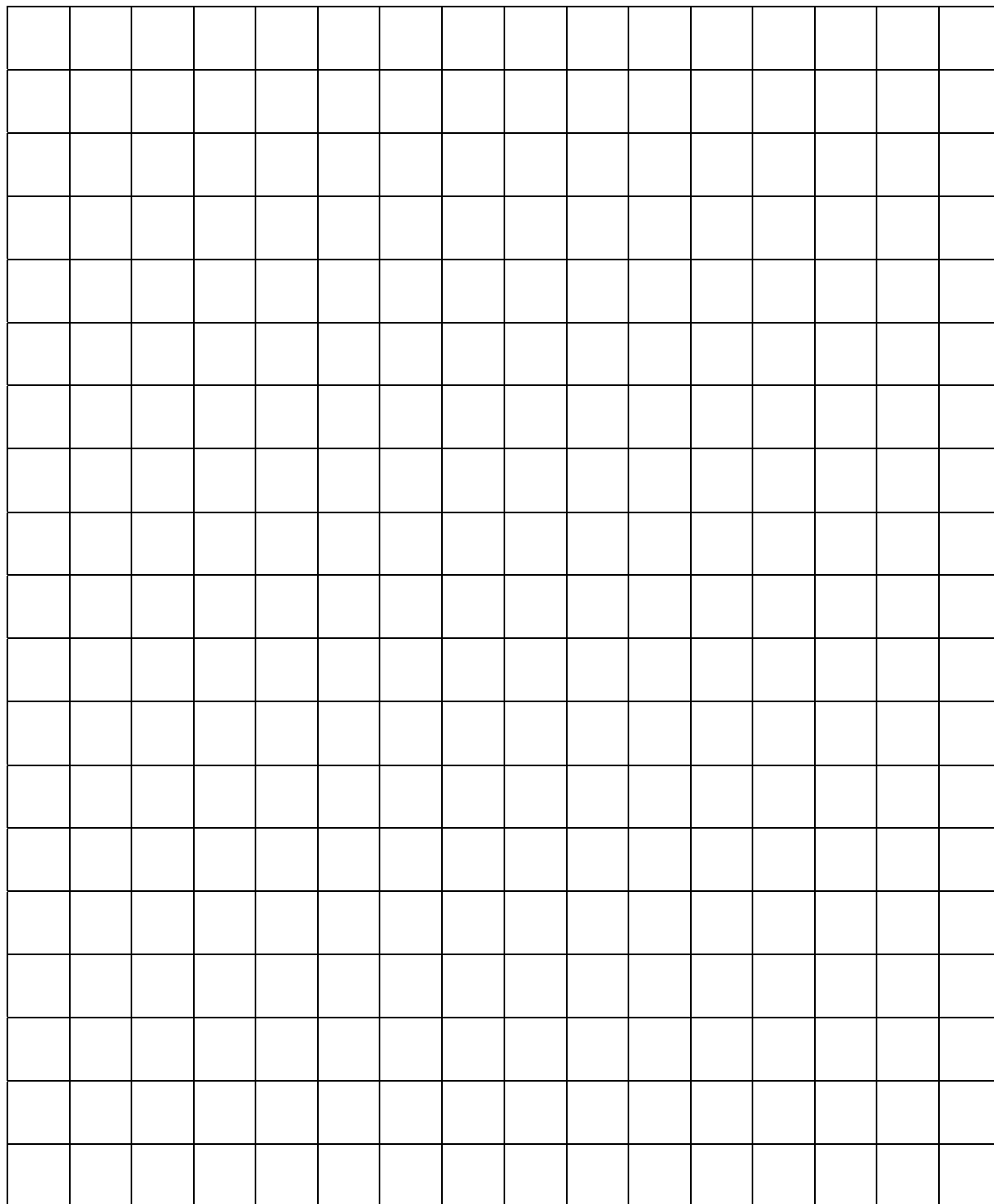


Grid Paper

Line Master 4-1

1 Centimetre

Name: _____

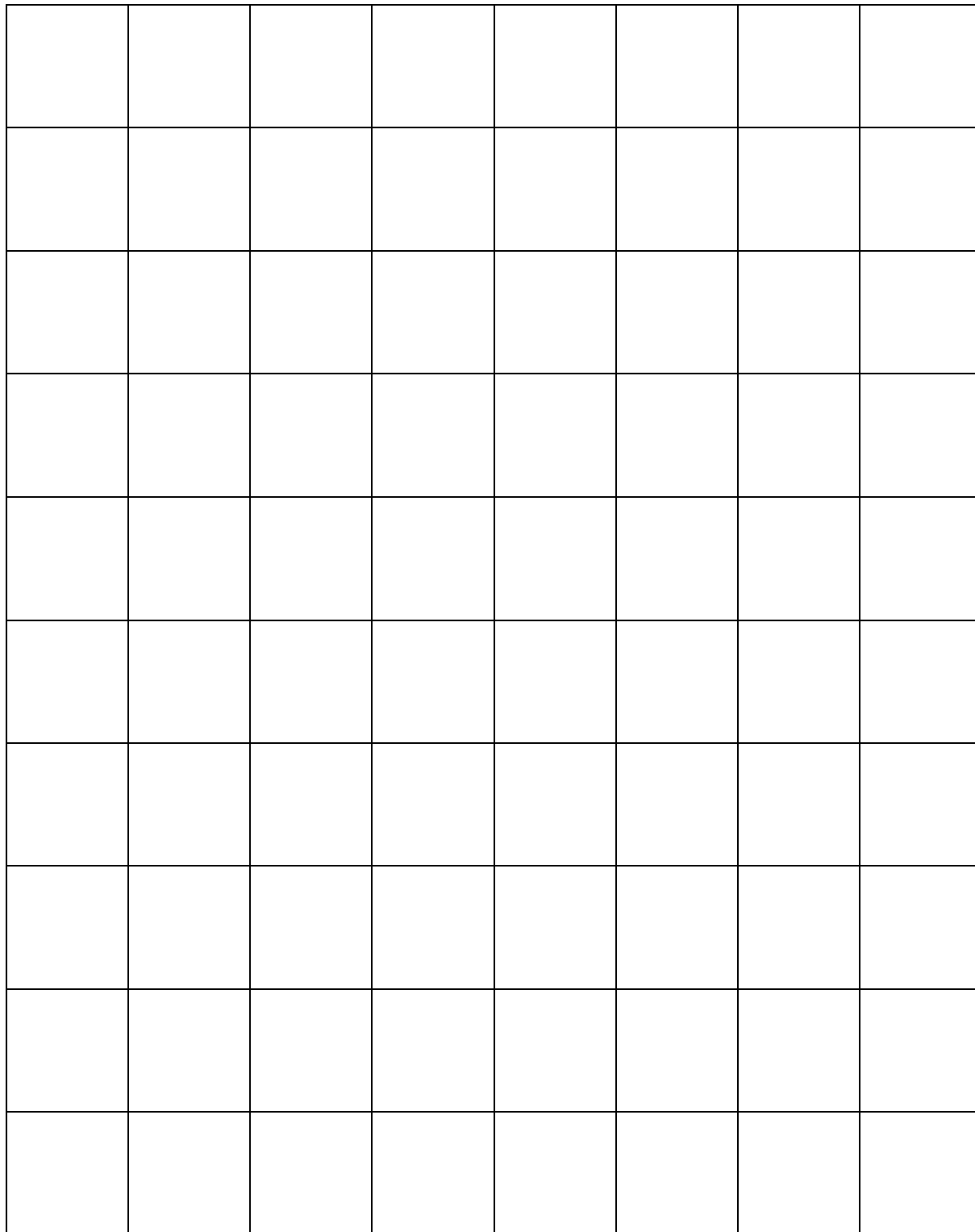


Grid Paper

Line Master 4-2

2 Centimetre

Name: _____

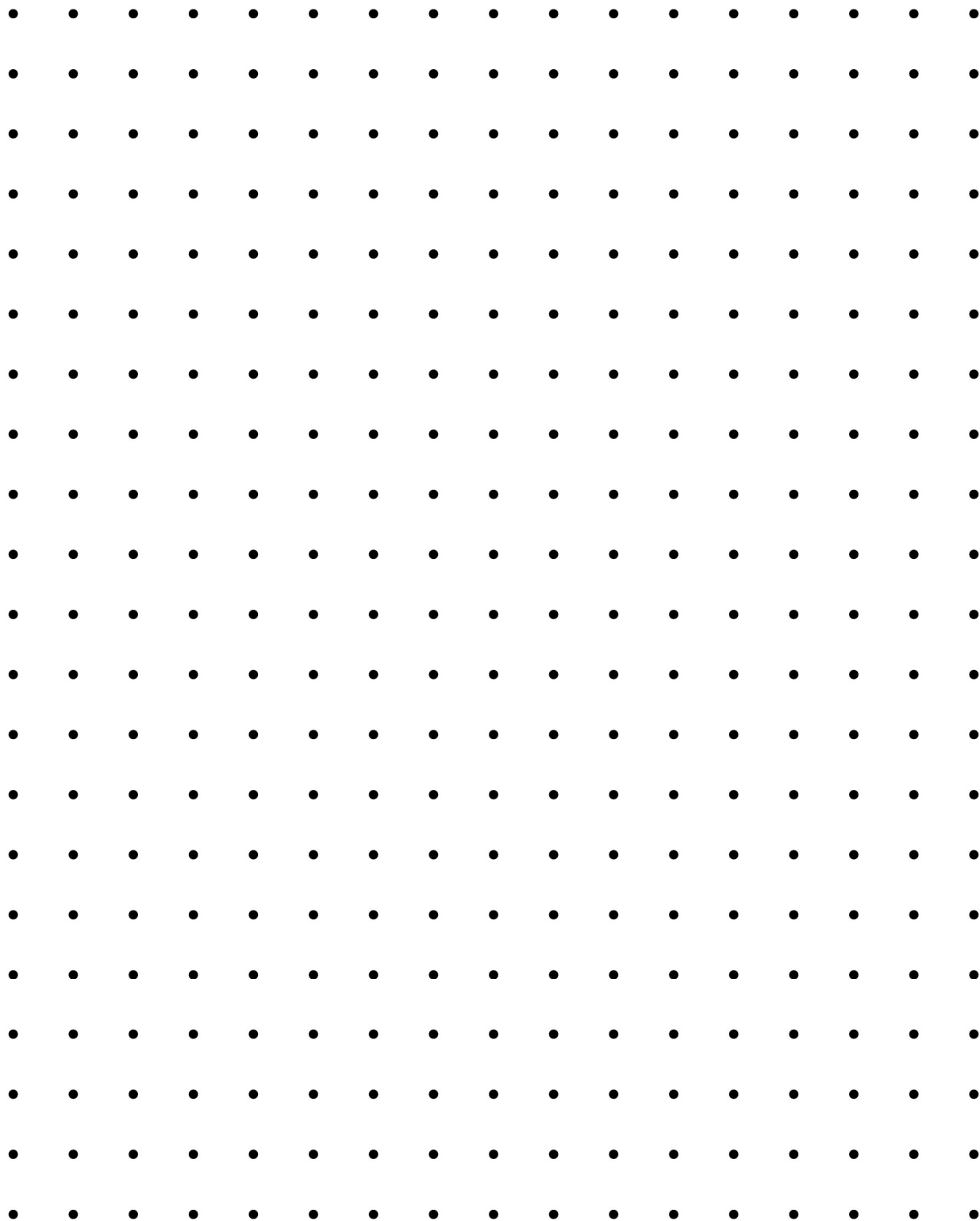


Dot Paper

Line Master 5-1

1 Centimetre

Name: _____

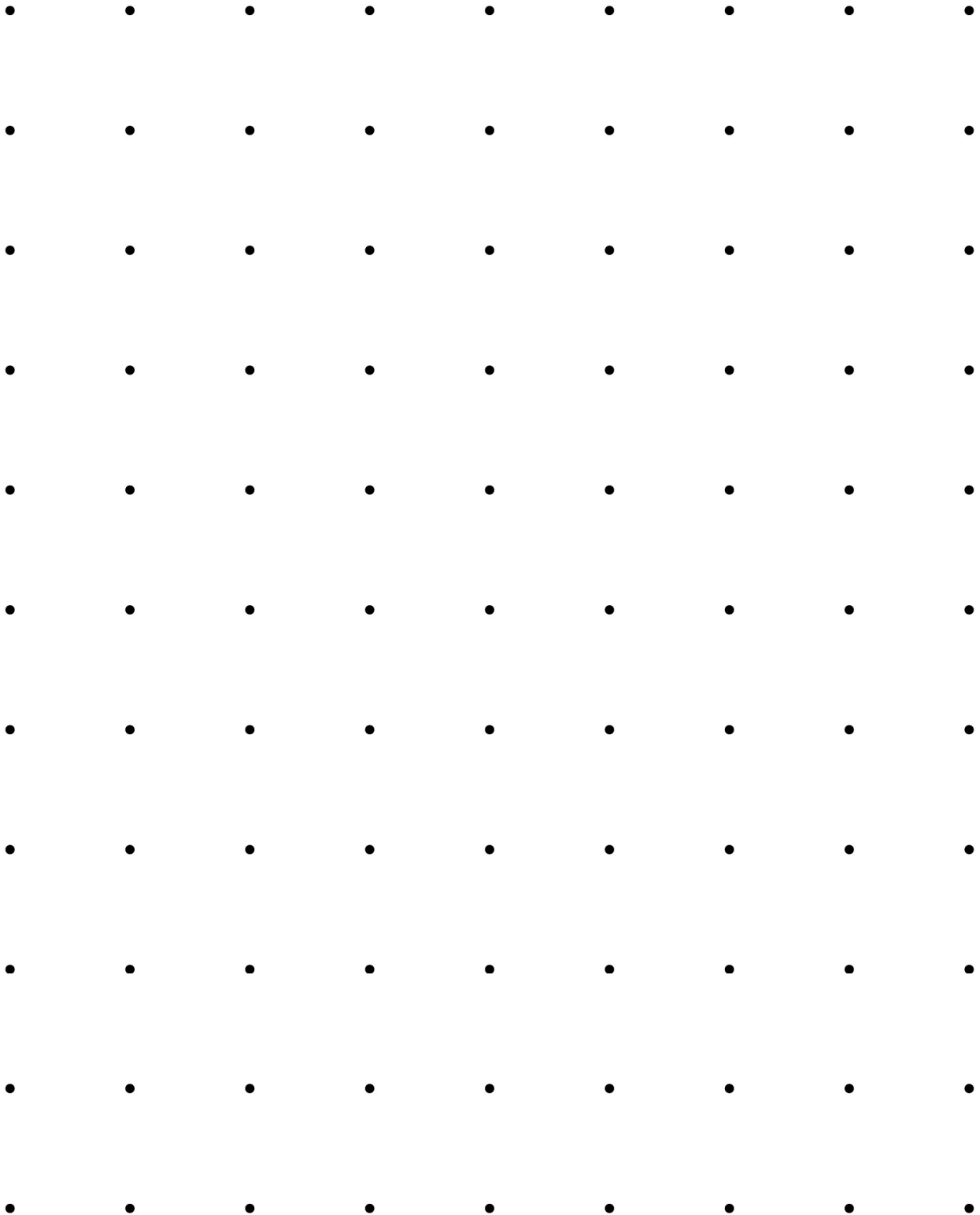


Dot Paper

Line Master 5-2

2 Centimetre

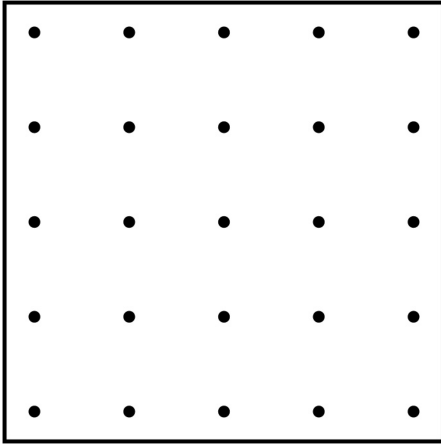
Name: _____



Geoboard Challenge

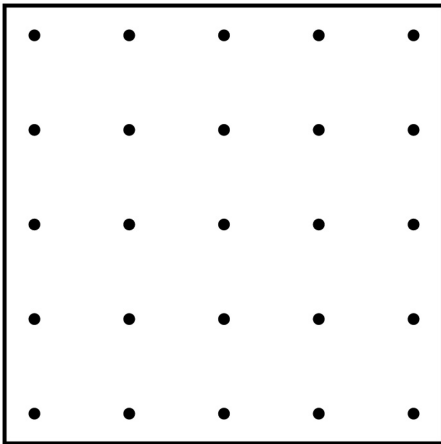
Line Master 6

Name: _____



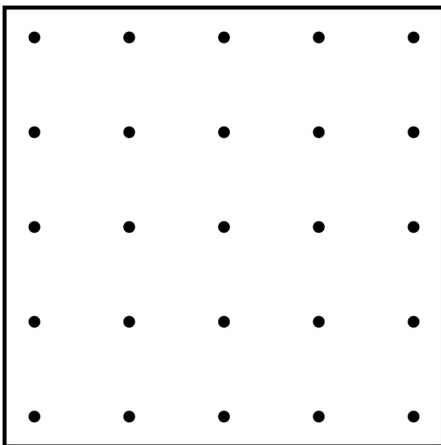
The perimeter measures

This shape has (circle)
the greatest perimeter.
the middle perimeter.
the least perimeter.



The perimeter measures

This shape has (circle)
the greatest perimeter.
the middle perimeter.
the least perimeter.

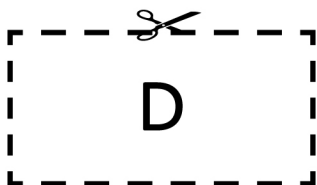
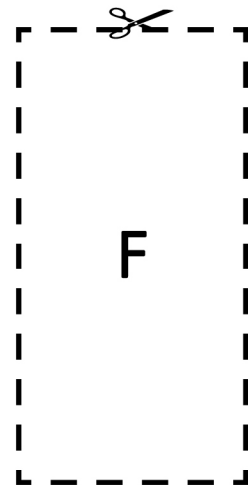
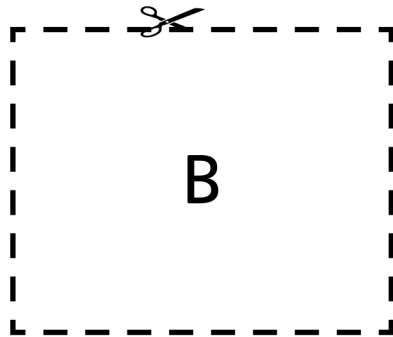
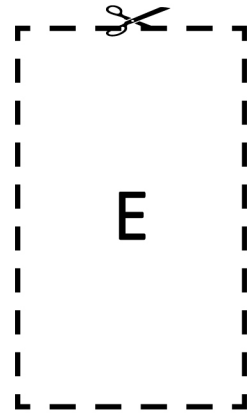
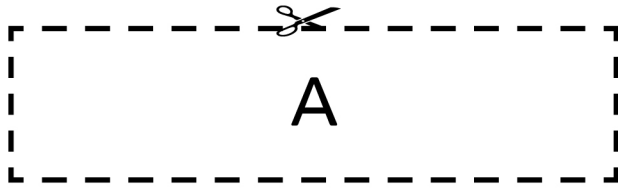


The perimeter measures

This shape has (circle)
the greatest perimeter.
the middle perimeter.
the least perimeter.




Rectangles

Line Master 7



Roll and Flip Cards

Line Master 8

 greatest perimeter	 greatest perimeter	 greatest perimeter
least perimeter	least perimeter	least perimeter
greatest area	greatest area	greatest area
least area	least area	least area

Roll and Flip Score Sheet

Line Master 9

Name: _____

Round	Card (circle)		My Measurement	My Friend's Measurement
1	least perimeter	least area		
	greatest perimeter	greatest area		
2	least perimeter	least area		
	greatest perimeter	greatest area		
3	least perimeter	least area		
	greatest perimeter	greatest area		
4	least perimeter	least area		
	greatest perimeter	greatest area		
5	least perimeter	least area		
	greatest perimeter	greatest area		

20 Square Units

Line Master 10

Name: _____

Shape	Area	Perimeter

Mini-Book Template

Line Master 11

<p>My Pet's Home</p> <p>by</p>	<p>My pet is a</p>
<p>The perimeter of my pet's home is</p>	<p>The area of my pet's home is</p>

Area and Perimeter Problems

Line Master 12–1



Adam wants to put a rug in his room so the bunnies can be comfy when they come inside for a visit. The rug is a rectangle with a perimeter of 10 metres. The length of one side is 2 metres.

What are the lengths of the other sides?

Use words, numbers, and drawings in your answer.



Katie is going to help build a fence around the family's garden so the bunnies don't eat their vegetables! The garden is 5 metres wide and 6 metres long.

How much fencing will Katie need?

Use words, numbers, and drawings in your answer.



Area and Perimeter Problems

Line Master 12-2



Adam's classroom is 7 metres long and 6 metres wide. Katie's classroom is 8 metres long and 5 metres wide.

What is the perimeter of each classroom?

Which classroom has the greater area?



Uncle Matt is going to build a bunny home for some bunnies he is taking to his house. He has 30 metres of fencing.

Draw as many rectangles as you can that would have a perimeter of 30 metres. Label the lengths of all the sides.

Uncle Matt wants his bunny home to have the greatest area possible. Which of your rectangle designs should he use?



Measurements About YOU! **Line Master 1**

(Assessment Master)

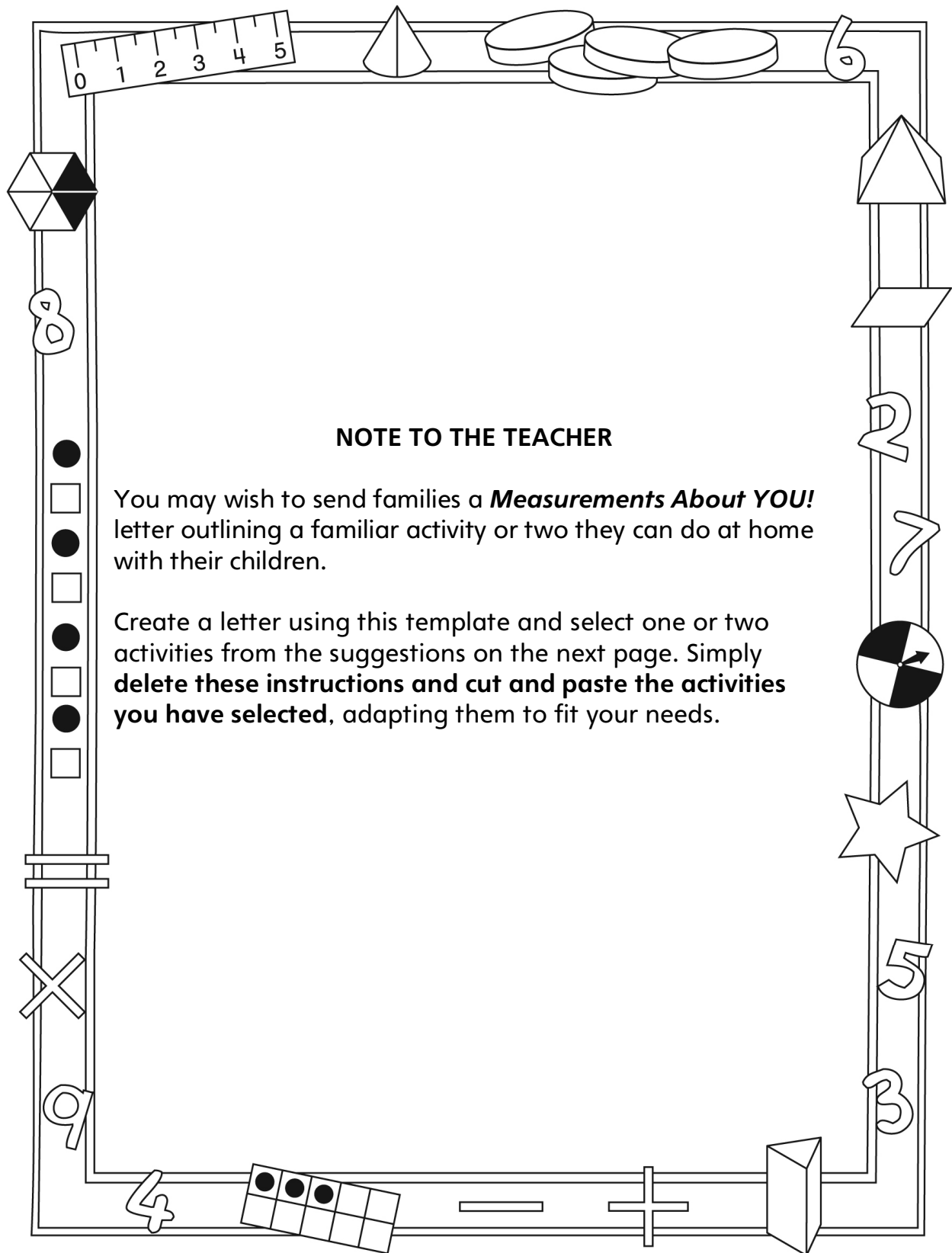
Name: _____

Estimate, Measure, and Compare Attributes	Not observed	Sometimes	Consistently
Uses familiar referents to estimate measures			
Estimates, measures, and compares length			
Estimates, measures, and compares mass			
Estimates, measures, and compares capacity			
Estimates, measures, and compares area			
Identify and Relate Measures			
Selects appropriate units for measuring			
Compares and relates linear measures			
Relates millilitres to litres			
Relates grams to kilograms			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

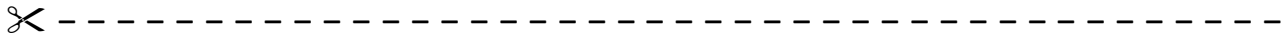
You may wish to send families a *Measurements About YOU!* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

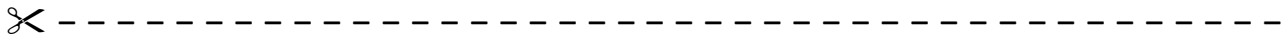
Connecting Home and School Line Master 2–2

Dear Family:

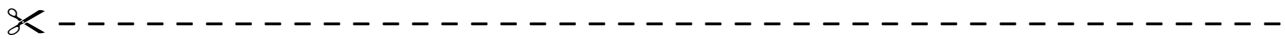
We have been working on **Measurements About YOU!**, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Units can be used to measure and compare attributes.” Particular focus is placed on estimating, measuring, and comparing length, mass, capacity, and area. Try this activity at home.



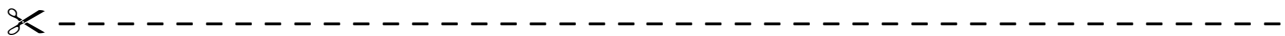
Reading the Story: As you read, ask your child to share what he/she finds to be an interesting measurement. Together, you might estimate, measure, and compare the heights of different family members. You also might pull strands of hair from willing family members and then estimate, measure, and compare hair length.



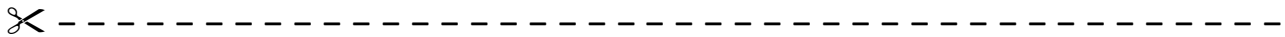
Litres and Kilograms: What can you find at home with a measure of 1 litre (L) or 1 kilogram (kg)? Encourage your child to search the refrigerator and cupboards to find containers that hold 1 L, as well as for packages that have a mass of 1 kg. Have your child draw, photograph, and/or list what she/he finds and bring these findings to class by (date).



Finding Benchmark Lengths: Encourage your child to search for and record items that have a length close to or exactly 1 centimetre (cm), 10 cm, and 1 m. Please ensure your child brings her/his findings to class by (date).



Personal Measures: The book begins with the character sharing birth measures. If you have such records about your child, you might share them with her/him. If you have records from annual doctor checkups, your child may be interested in seeing those, as well. You can talk about growth and together make some predictions.

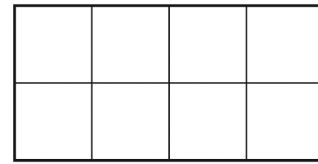


Sincerely,

Measurements About YOU! Line Master 3

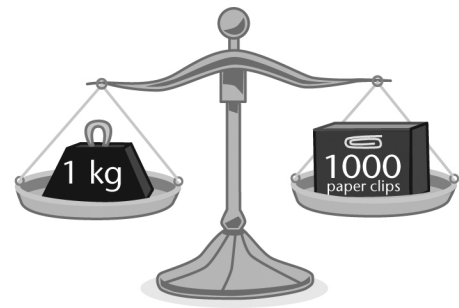
Math Mat

area: the amount of space a shape covers.
We measure area in square units. The area of the rectangle at right is 8 square units.



centimetre (cm): a unit to measure length.
The line shown is 1 cm long. _____

gram (g): a unit to measure mass.
A small paper clip has a mass of *about* 1 g.



kilogram (kg): a unit to measure mass.
There are 1000 g in 1 kg.

kilometre (km): a unit to measure distance.
There are 1000 m in 1 km.

litre (L): a unit to measure capacity.
A large bottle of water might hold 1 L.



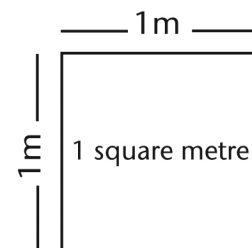
metre (m): a unit to measure length.
There are 100 cm in 1 m.

millilitre (mL): a unit to measure capacity.
A teaspoon holds *about* 5 mL.
There are 1000 mL in 1 L.

millimetre (mm): a unit to measure length.
The line shows 1 cm divided into 10 mm.



square metre: the space covered by a square with sides that are each 1 m long.



Comparing Body Lengths

Line Master 4

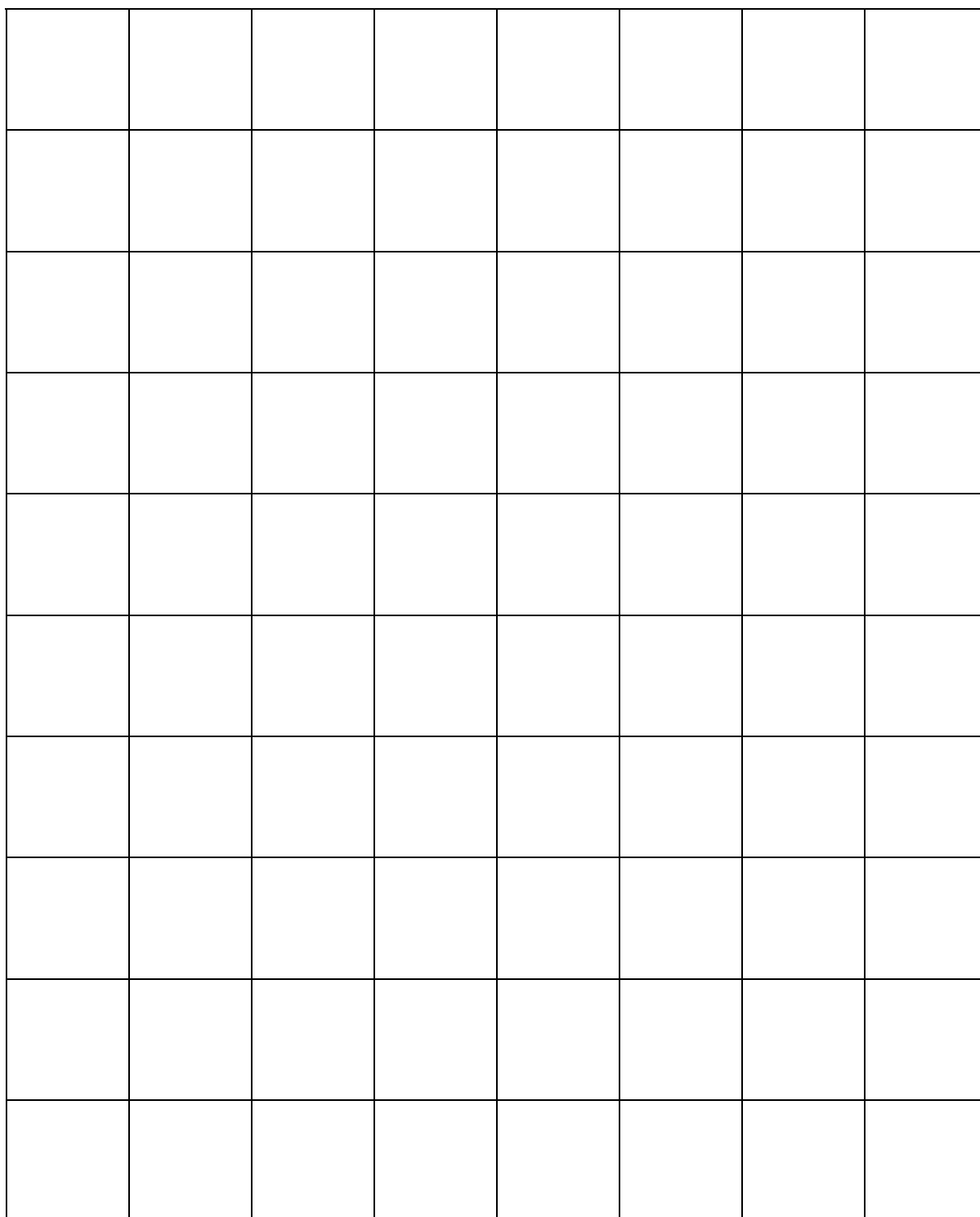
Name: _____

I am comparing	My estimate	My measure	I found out that...
leg length to arm length	_____ _____	_____ _____	
_____ to _____	_____ _____	_____ _____	
_____ to _____	_____ _____	_____ _____	
_____ to _____	_____ _____	_____ _____	

Grid Paper

Line Master 5-1

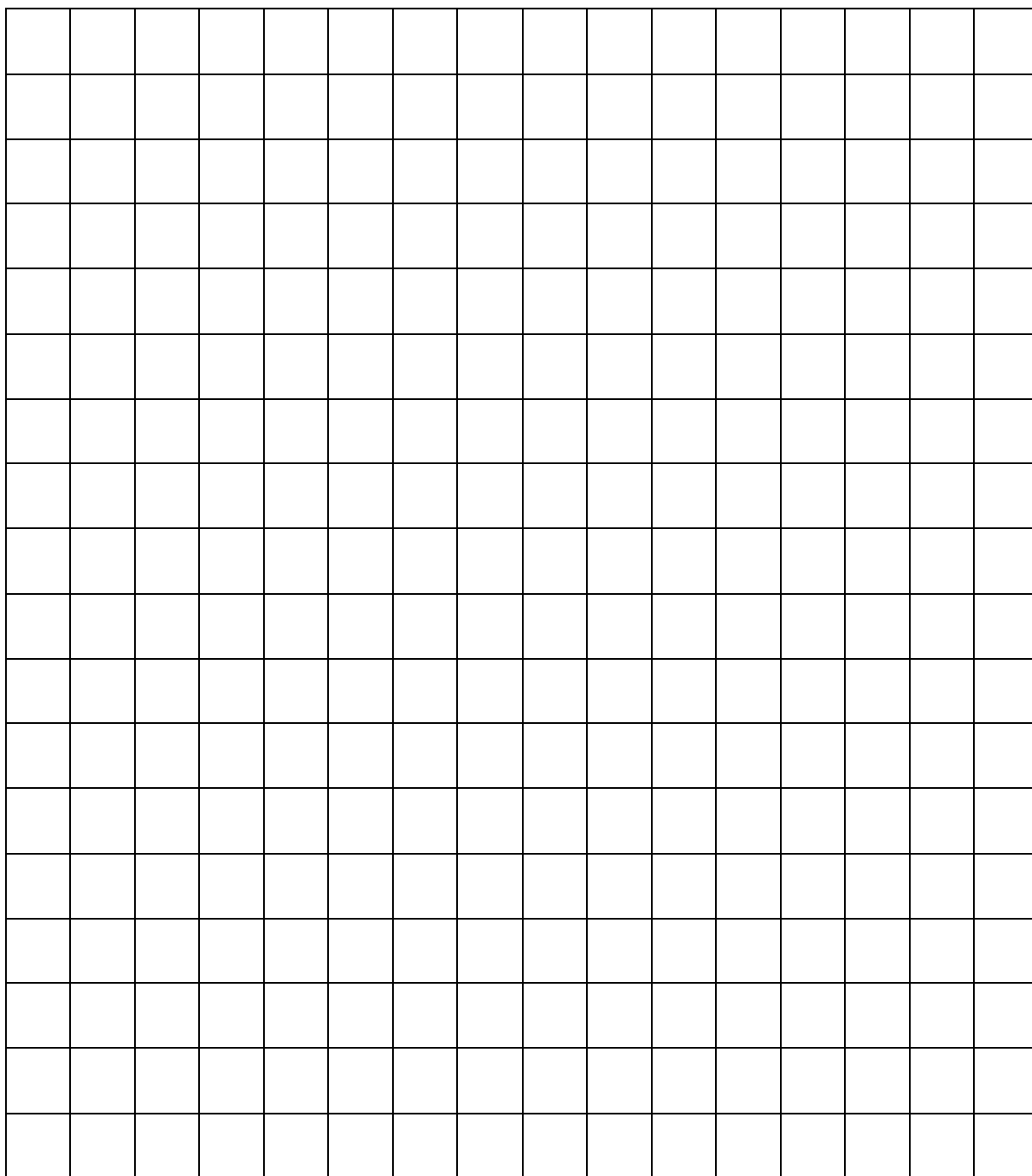
2 Centimetre



Grid Paper

Line Master 5-2

1 Centimetre



Measuring Lengths

Line Master 6

Name: _____

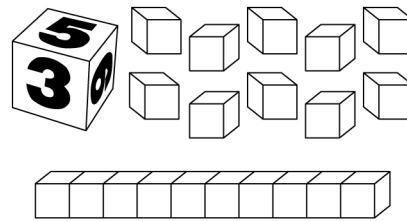
I am measuring	My estimate	My measure

Make a Metre

Line Master 7-1

What you need:

- number cube
- Base Ten unit cubes and rods



How to Play

- Take turns rolling the number cube. Take that number of cubes or rods. For example, if you roll 5:
 - You can take 5 cubes to make a length of 5 cm.
 - OR
 - You can take 5 rods to make a length of 50 cm.
- Whenever you have 10 unit cubes, trade them for 1 rod.
- Record each turn. After 7 turns, stop and find your total length. The player closest to 1 m scores 1 point. Getting 1 m exactly scores 2 points. Here is an example of how to record:

Turn	Player <u>Addie</u>	Player <u>Eric</u>
1	3 cm	20 cm
2	10 cm	30 cm
3	20 cm	6 cm
4	10 cm	2 cm
5	40 cm	10 cm
6	2 cm	30 cm
7	6 cm	5 cm
Total Length	91 cm	103 cm
How Close?	9 cm under	3 cm over

Make a Metre

Line Master 7-2



Turn	Player _____	Player _____
1		
2		
3		
4		
5		
6		
7		
Total Length		
How Close?		



Turn	Player _____	Player _____
1		
2		
3		
4		
5		
6		
7		
Total Length		
How Close?		



What's the Measure? Problems

Line Master 8-1

Measuring Length and Height



Here are body measurements some children made. Who ordered her/his measurements from least to greatest?

Sofia's measures: 15 cm, 65 cm, 1 m, 90 cm

Matti's measures: 2 m, 165 cm, 58 cm, 1 m

Raja's measures: 10 cm, 95 cm, 130 cm, 2 m

Eden's measures: 87 cm, 78 cm, 100 cm, 1 m



Oliver measured his height and his arm span.
He is 1 m 38 cm tall. His arm span is 135 cm.
Which is longer?
Explain your thinking.



The playground needs a new fence.
Circle the unit of measure they should use.

kilometres metres centimetres millimetres

Explain your thinking.



Circle the best estimate for the height of the ceiling.

150 cm 2 m 2 m 50 cm 3 m

Explain your thinking.



What's the Measure? Problems

Line Master 8–2

Measuring Capacity and Mass



Alexis recorded some personal measures for her ***Measurements About ME!*** book. Which unit should she use for each measure?

height

foot length

weight

hair length

lung capacity

skin on palm



When you were born, your length and weight were measured.

What unit was used to measure your length?

What unit was used to measure your weight?

Explain your thinking.



Which measure would you see on a milk carton?

1 L 1 kg 1 m



Which measure would you see on a bag of flour?

2 L 2 kg 2 m



Which measure would you see on a cereal box?

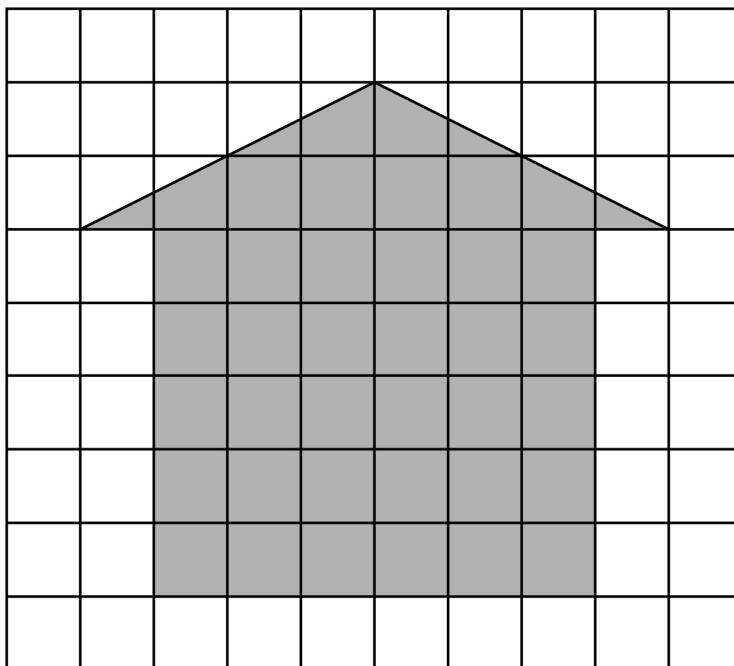
650 g 650 L 650 cm 650 kg



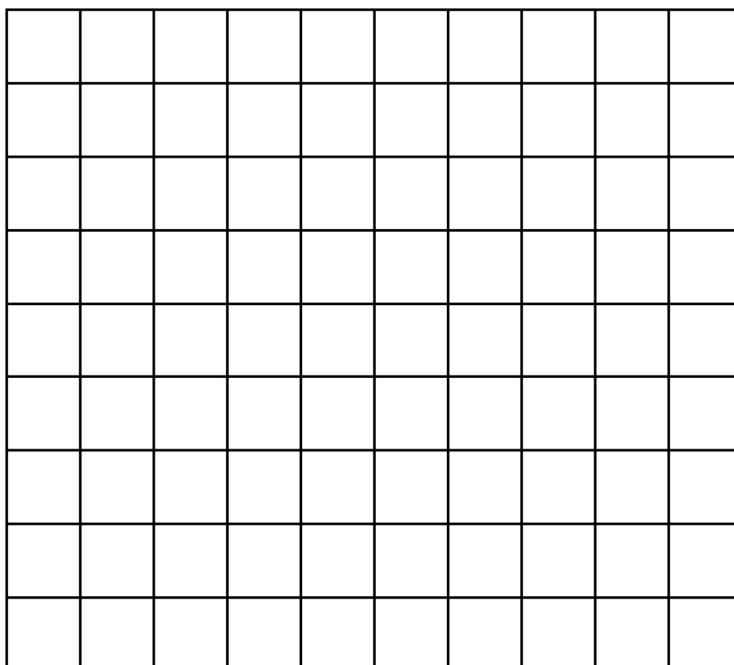
What's the Measure? Problems

Measuring Area 1

What is the area of this shape?  = 1 square unit



Draw a shape with the same area as the shape above.



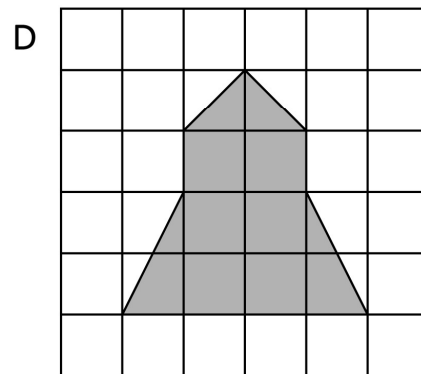
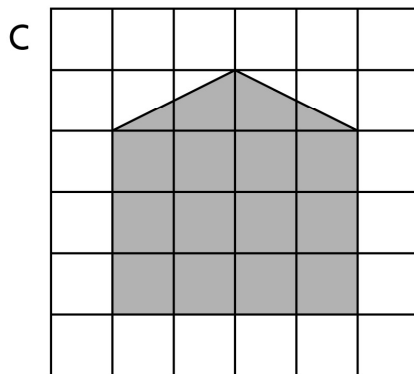
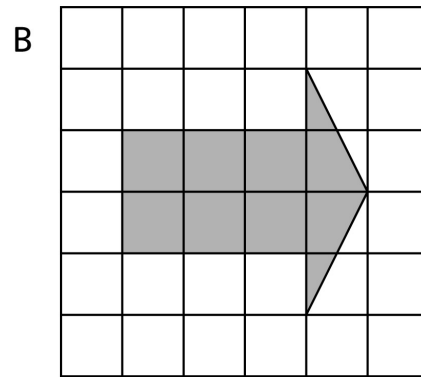
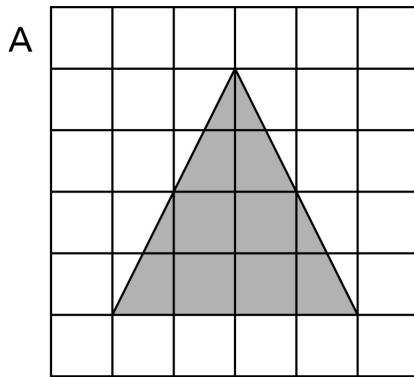
What's the Measure? Problems

Measuring Area 2

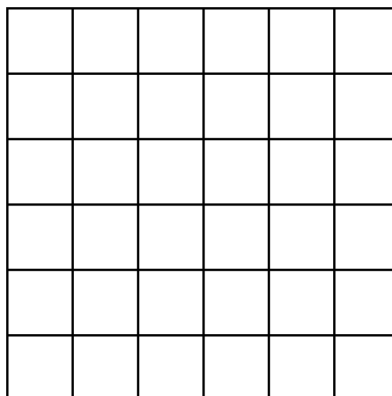
Which shape has an area of 9 square units?

Which shape has the greatest area?

Which shape has the least area?



Draw a shape with an area of 16 square units.



WONDERful Buildings

Line Master 1 (Assessment Master)

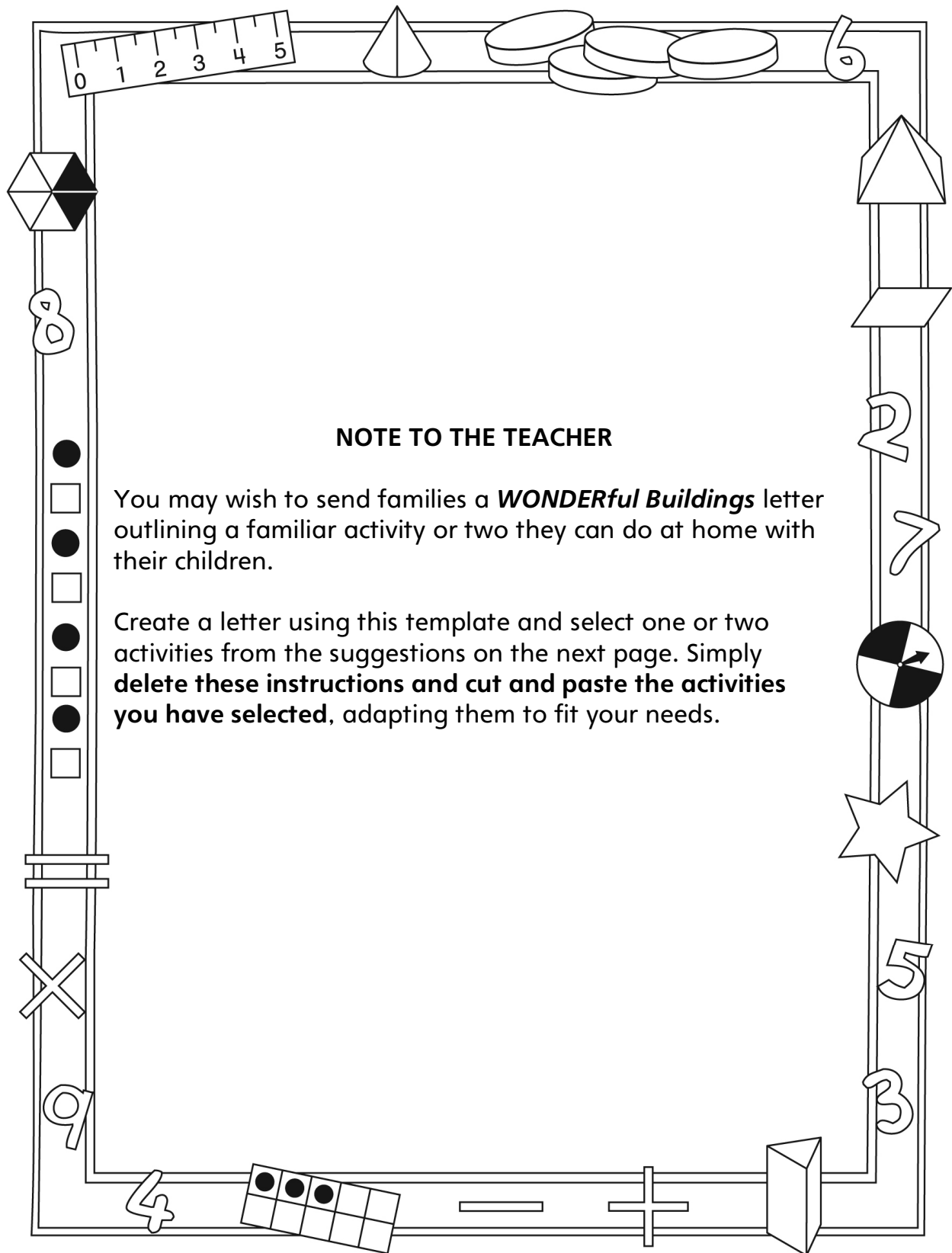
Name: _____

Identify, Describe, and Compare 2-D Shapes and 3-D Solids	Not observed	Sometimes	Consistently
Classifies and names 2-D shapes and 3-D solids			
Constructs and compares 2-D shapes and 3-D solids with given attributes			
Uses geometric properties to classify and compare 2-D shapes and 3-D solids			
Compose and Decompose 2-D Shapes and 3-D Solids			
Composes 2-D shapes by combining or partitioning 2-D shapes			
Constructs 3-D solids from nets			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

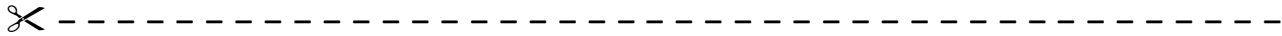
You may wish to send families a *WONDERful Buildings* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

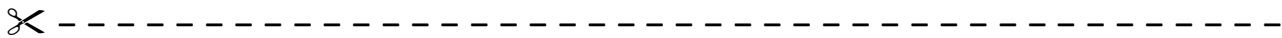
Connecting Home and School Line Master 2–2

Dear Family:

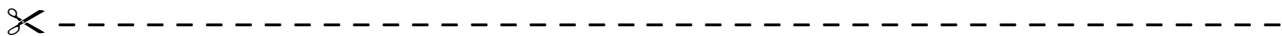
We have been working on **WONDERful Buildings**, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Shapes and solids can be explored and compared based on attributes.” Particular focus is placed on identifying, describing, and comparing 2-D shapes and 3-D solids. Try this activity at home with your child.



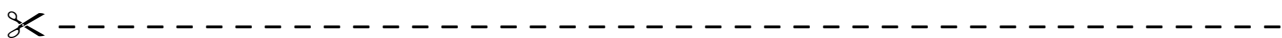
Reading the Story: Ask your child to share what he/she finds to be the most interesting building in the book. Discuss whether you agree with her/his choice. Page 24 prompts you to vote for a building for the new list of modern wonders. Encourage your child to survey other family members and friends to see how choices compare.



New List of Modern Wonders: We are talking about other buildings that could be on the new list of modern wonders. Please search online with your child for possible entries. Search terms such as “cool buildings,” “special buildings,” and “tall buildings” will lead you to images that are interesting and worth discussing. You can email or print your entries. We look forward to discussing all the choices.



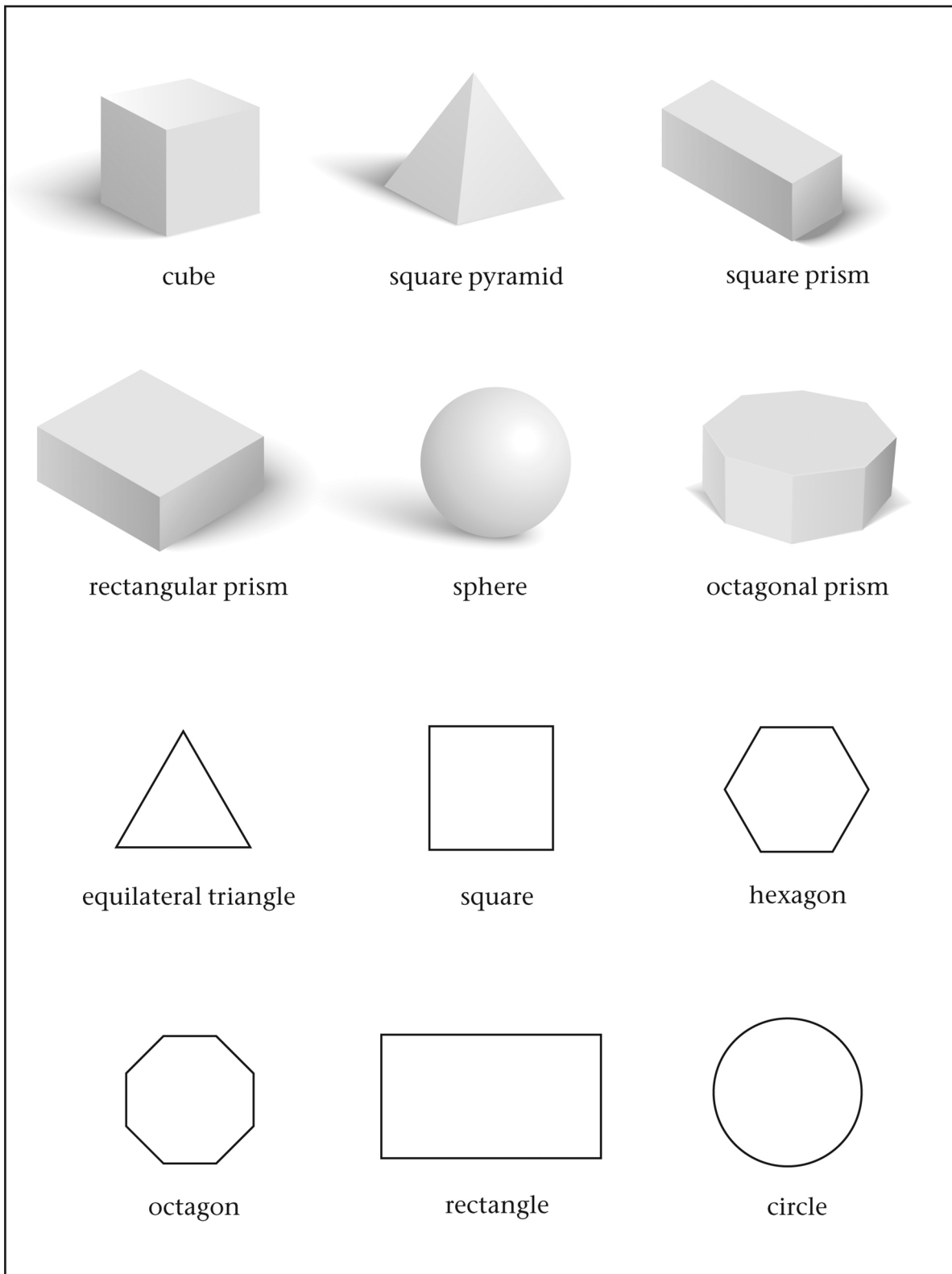
Making Models: We made models of structures and buildings using straws and modelling clay. Your child has a resealable plastic bag with similar building materials to use at home. He or she will show you how to create skeletal models (pyramids, cubes, prisms, and others). Together, try to use all of the materials (and feel free to add to them) to create an interesting one-of-a-kind model. Please have your child transport this back to school by (date). It might be best to transport it in a shoebox or other similar container.



Sincerely,

WONDERful Buildings Math Mat

Line Master 3



Great Pyramids

Line Master 4

Name: _____

I plan to make a pyramid with a base that is

_____.

I will need _____ straws and _____ balls of clay.

Sketch a plan of the pyramid you plan to build.
Include labels for edges, faces, and vertices.

Mark the line to show how successful you were in building the pyramid you planned.

not successful

very successful

Explain!

Making Models

Line Master 5

Name: _____

I plan to make a model of a _____.

I will need _____ straws and _____ balls of clay.

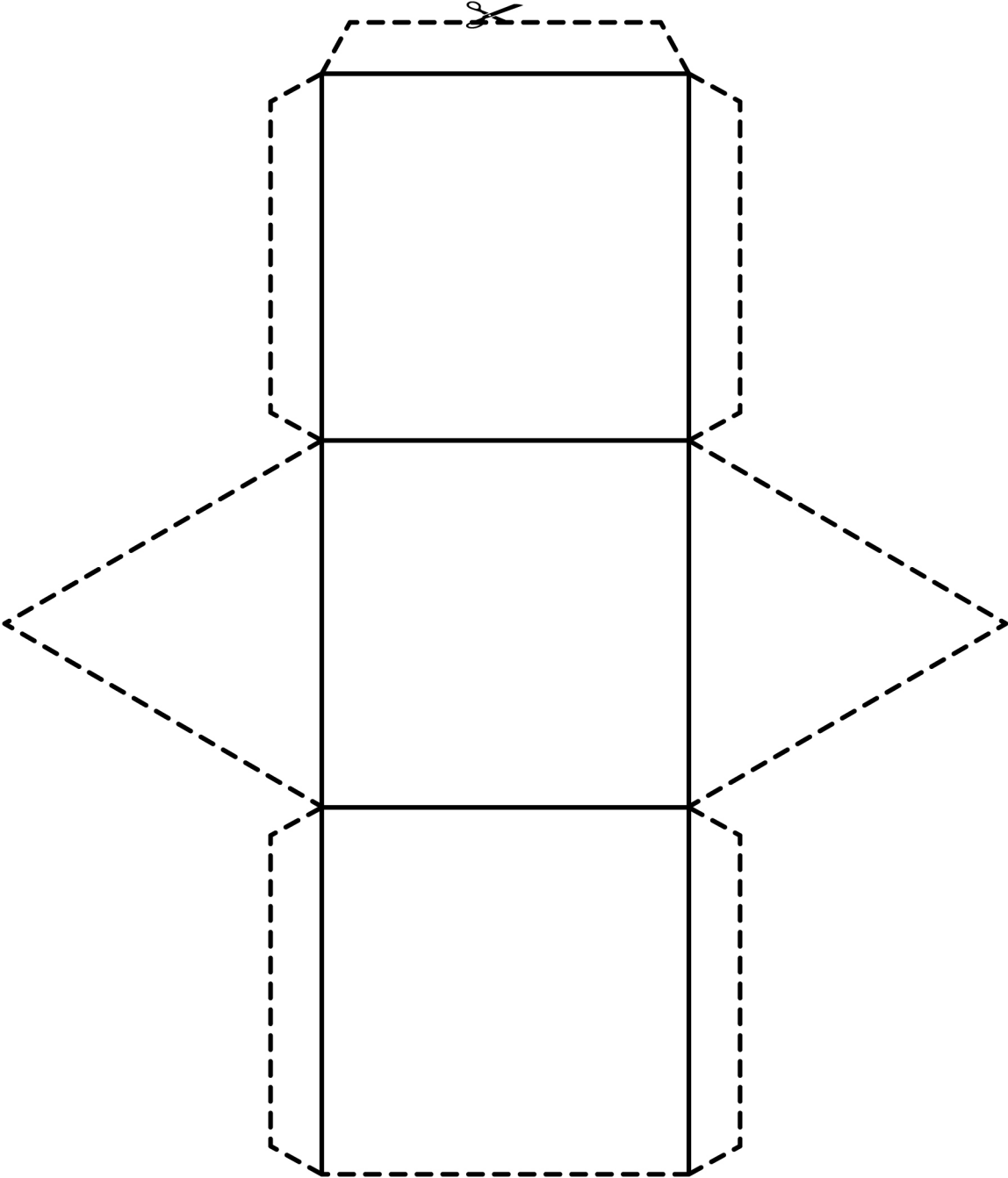
Sketch a plan of the model you plan to build.
Include labels for edges, faces, and vertices.

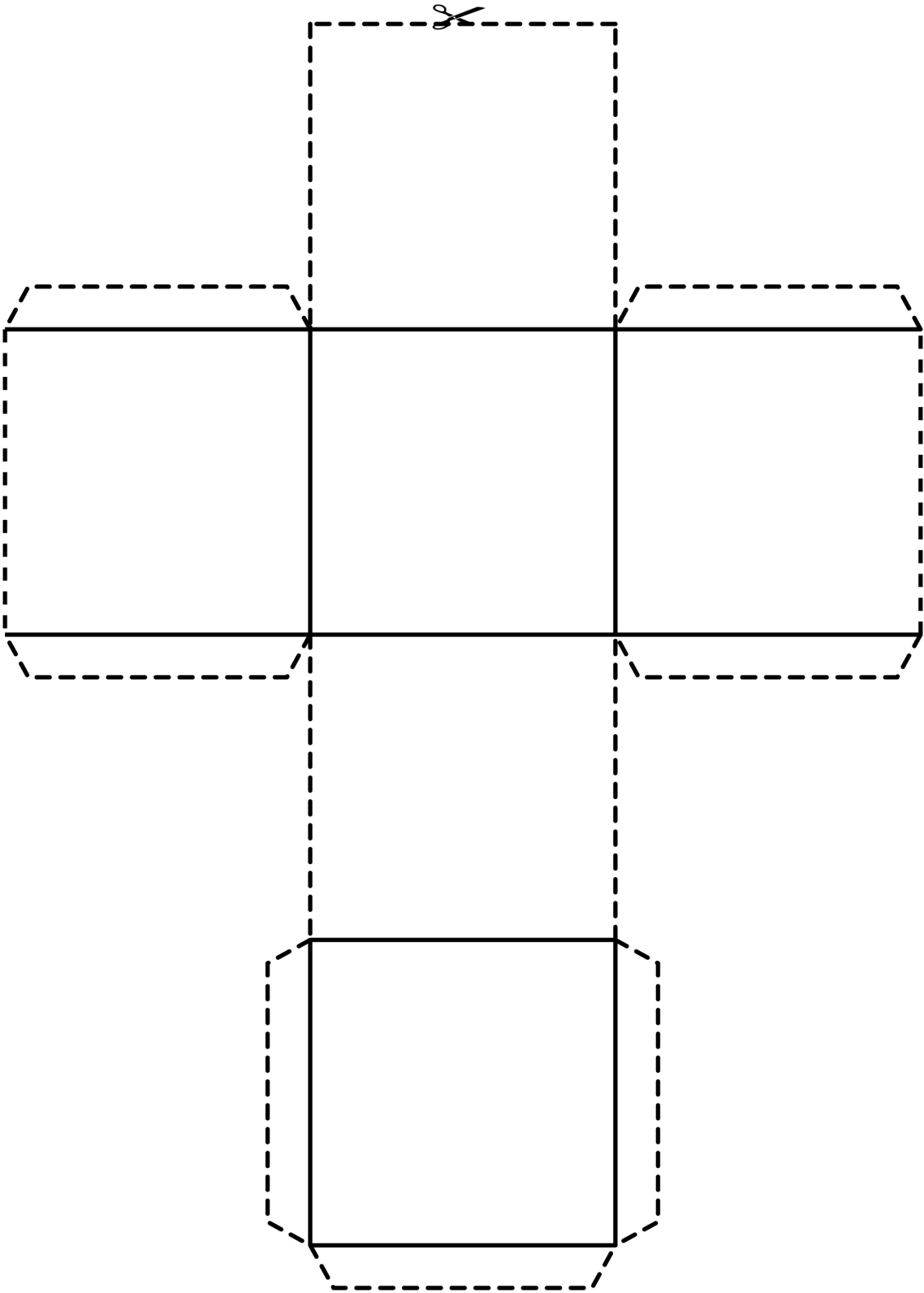
Mark the line to show how successful you were in building the model you planned.

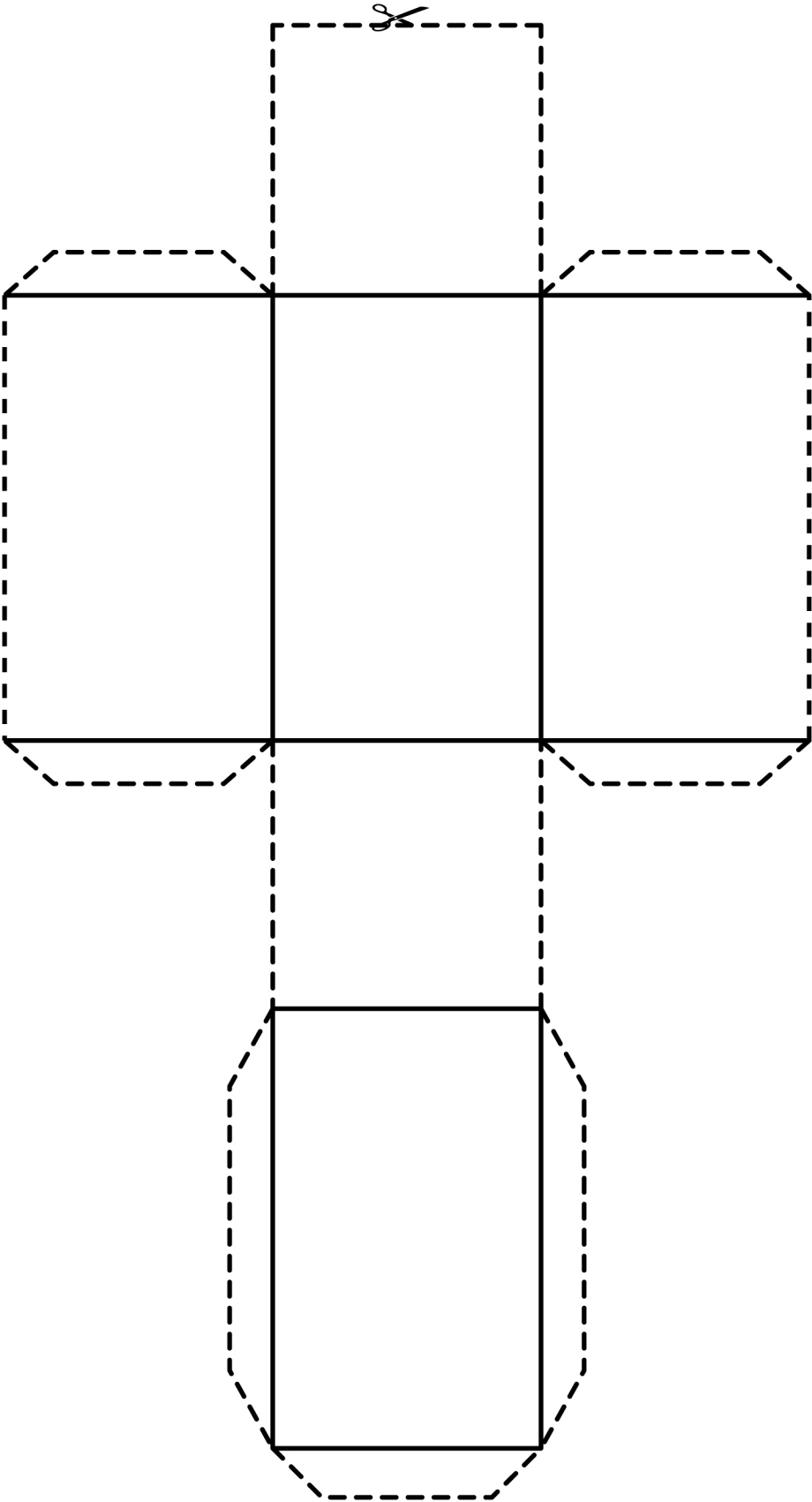
not successful

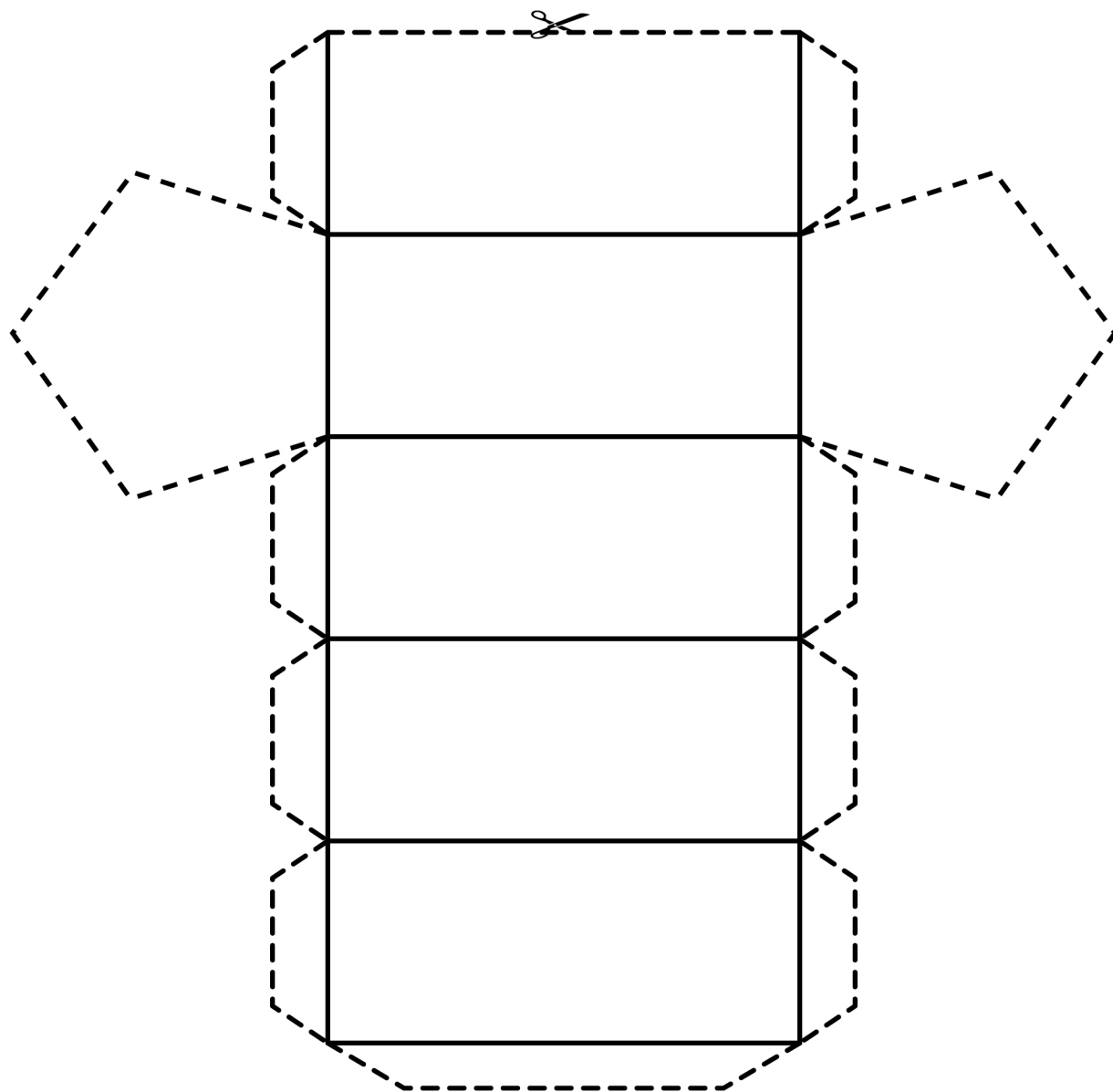
very successful

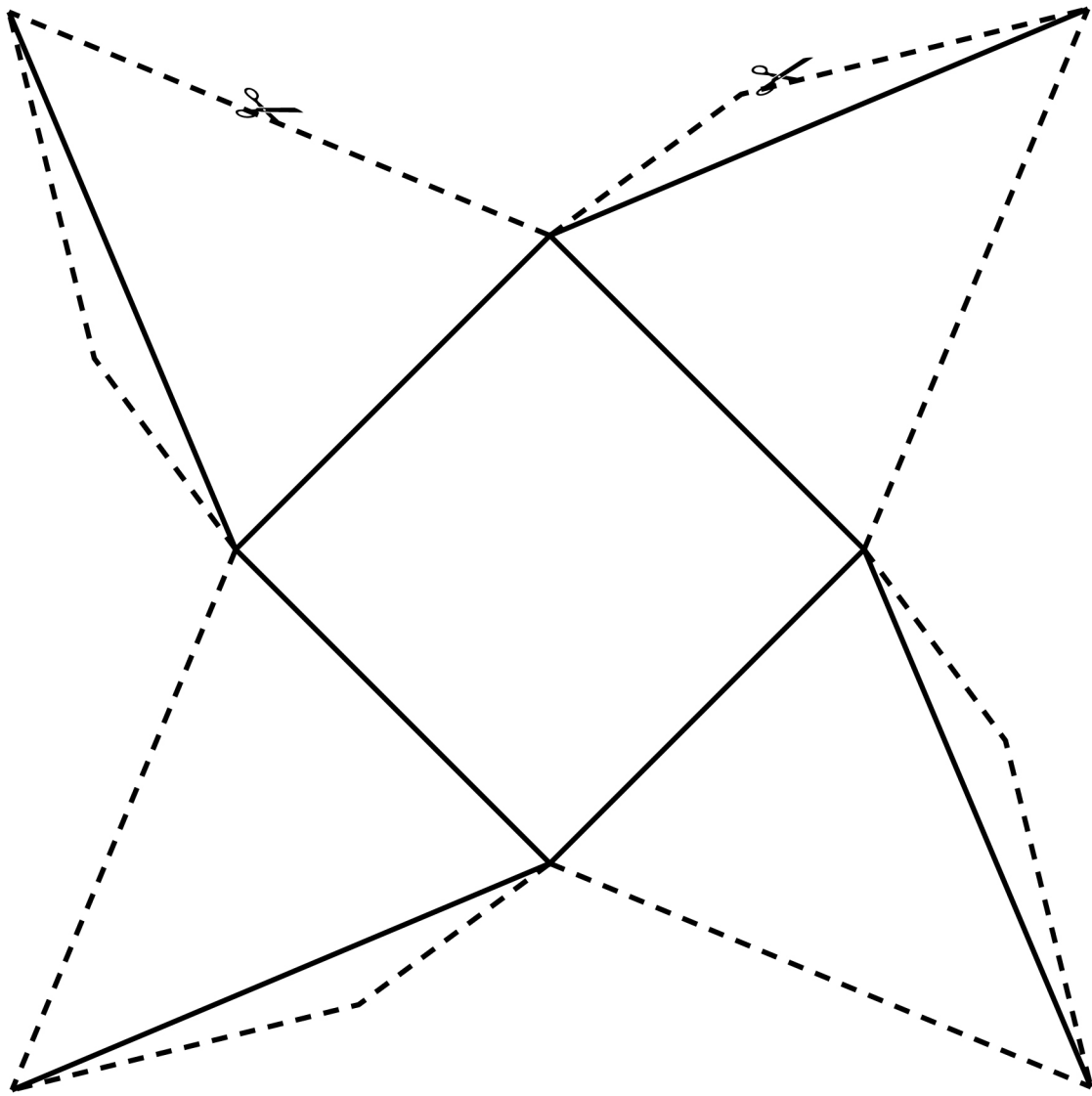
Explain!

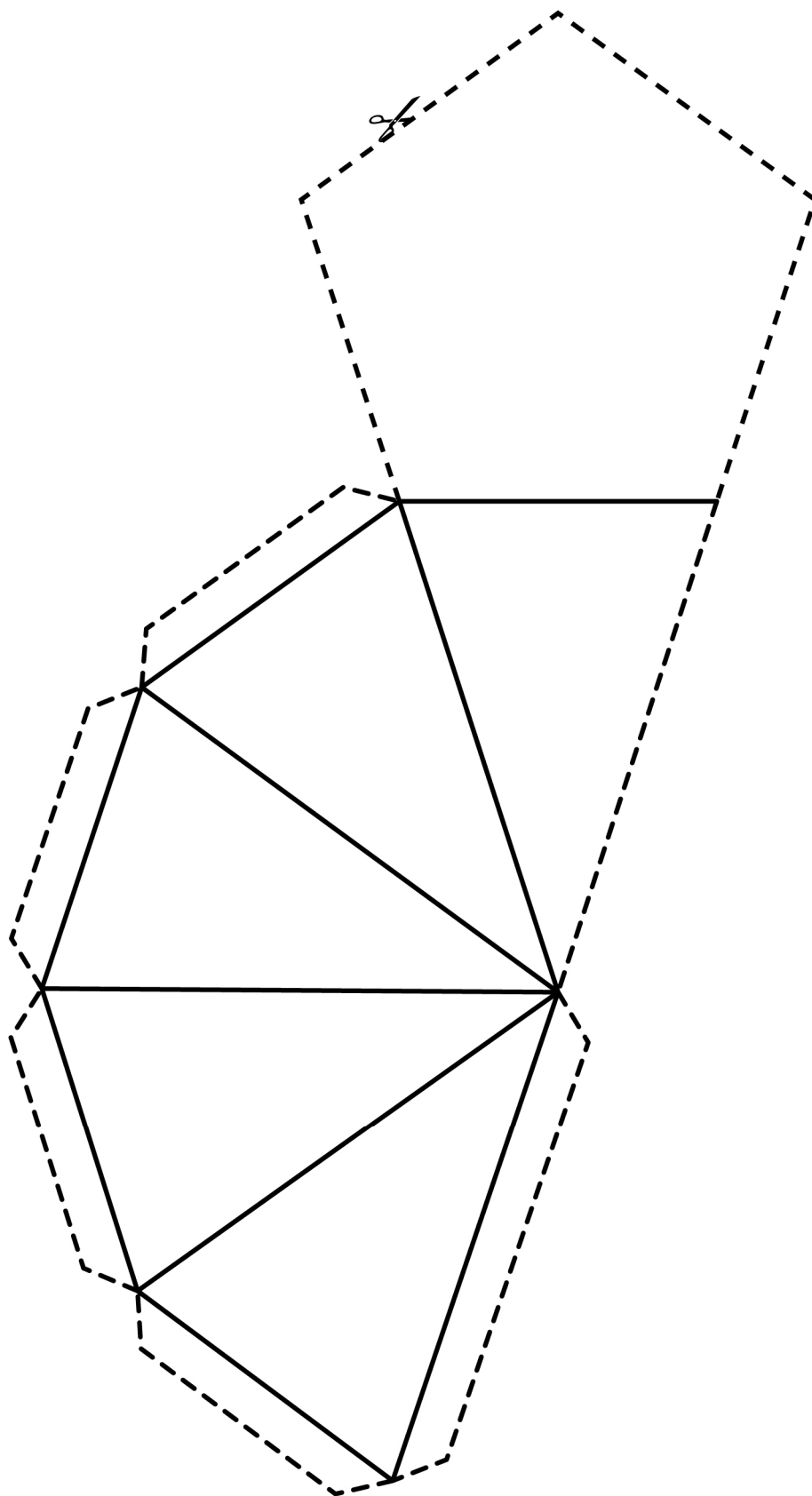


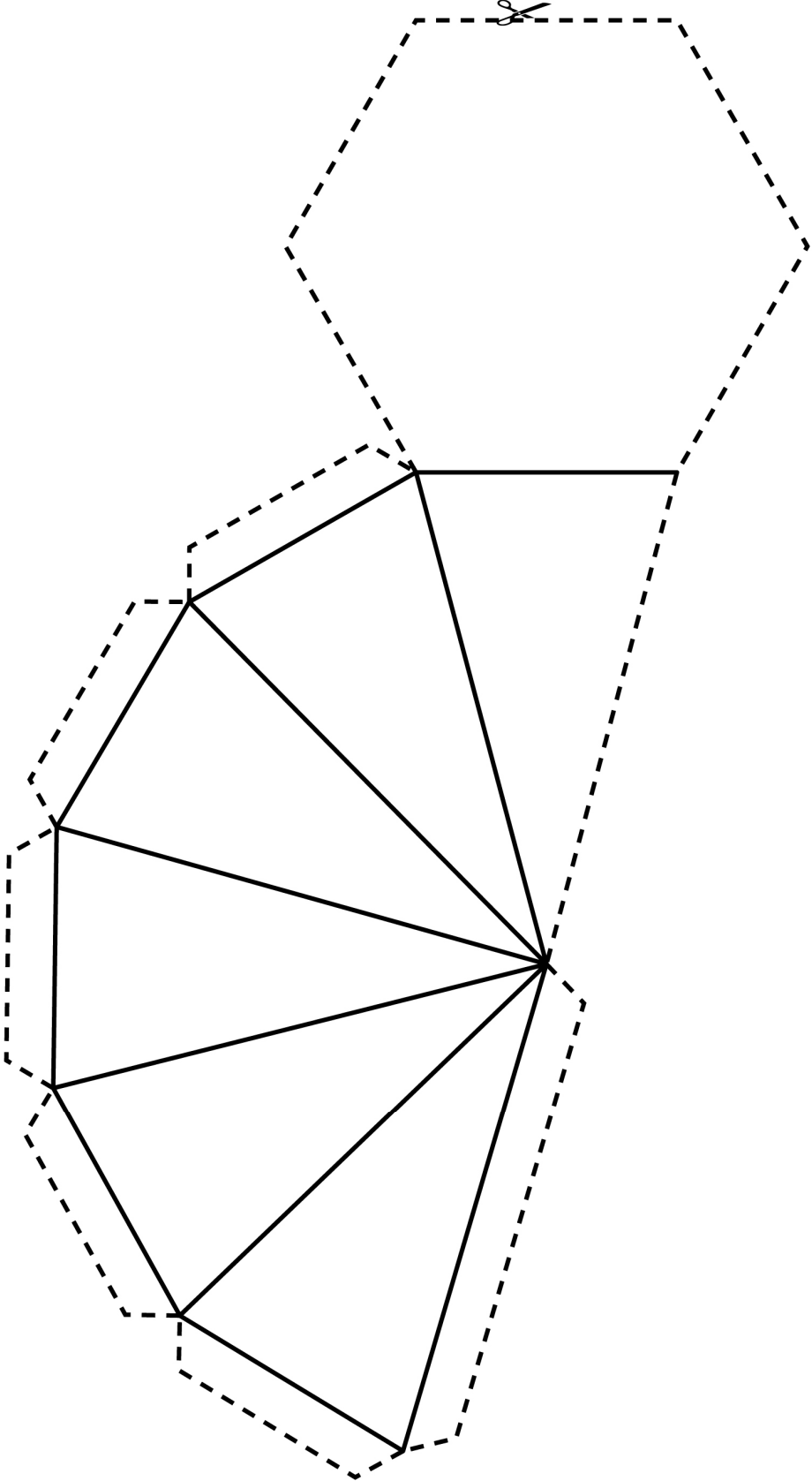


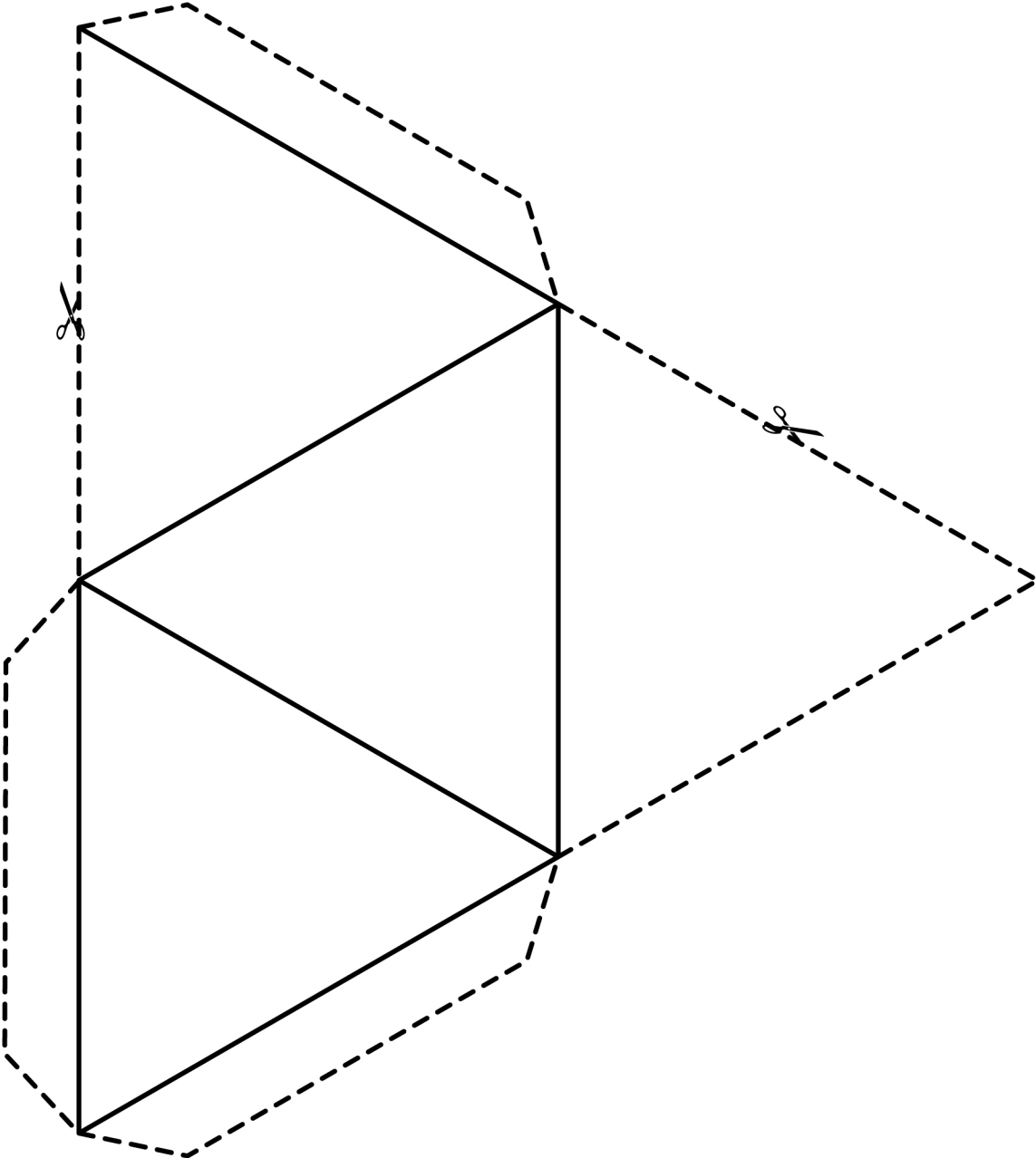


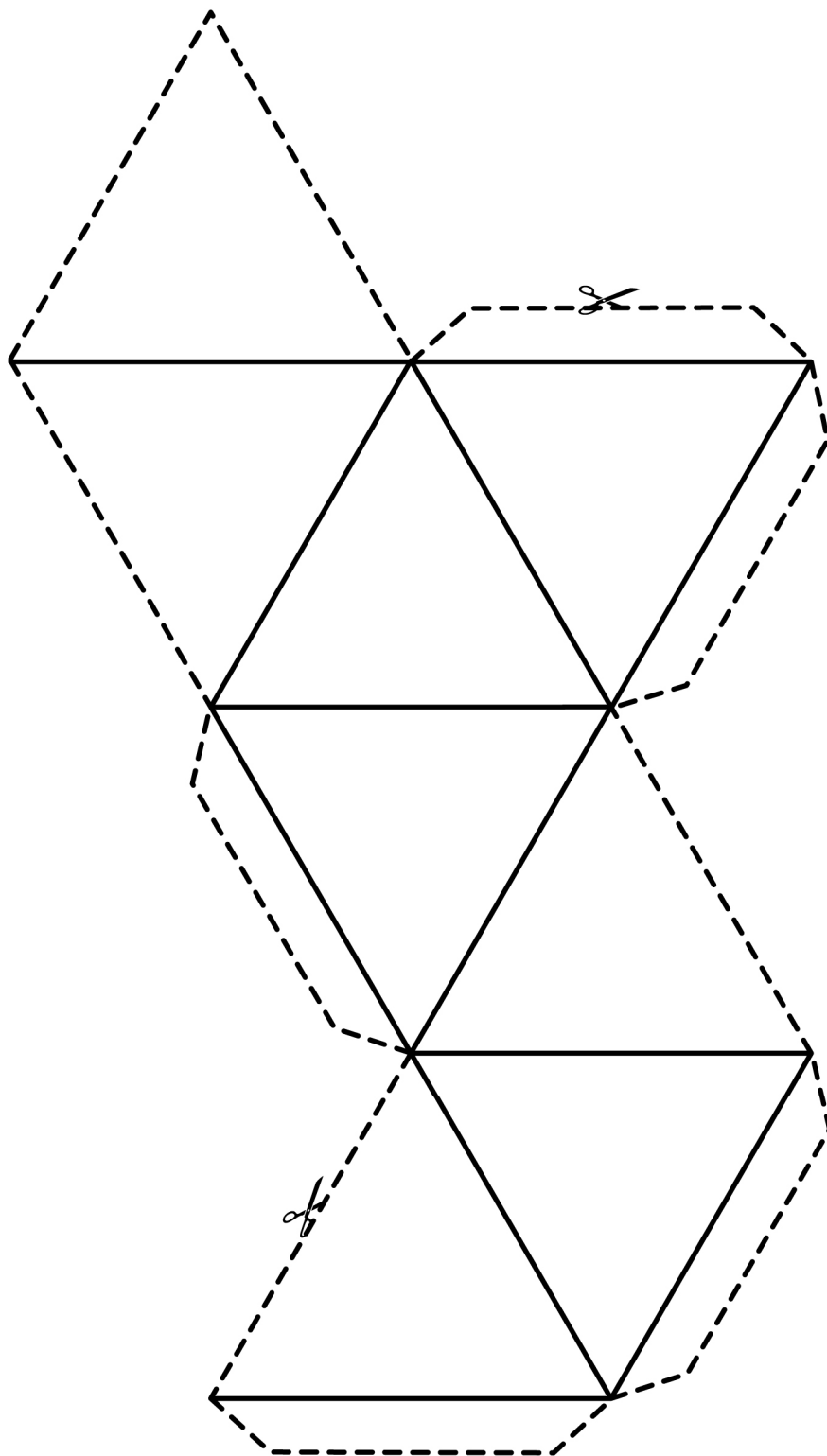












Solids and Nets

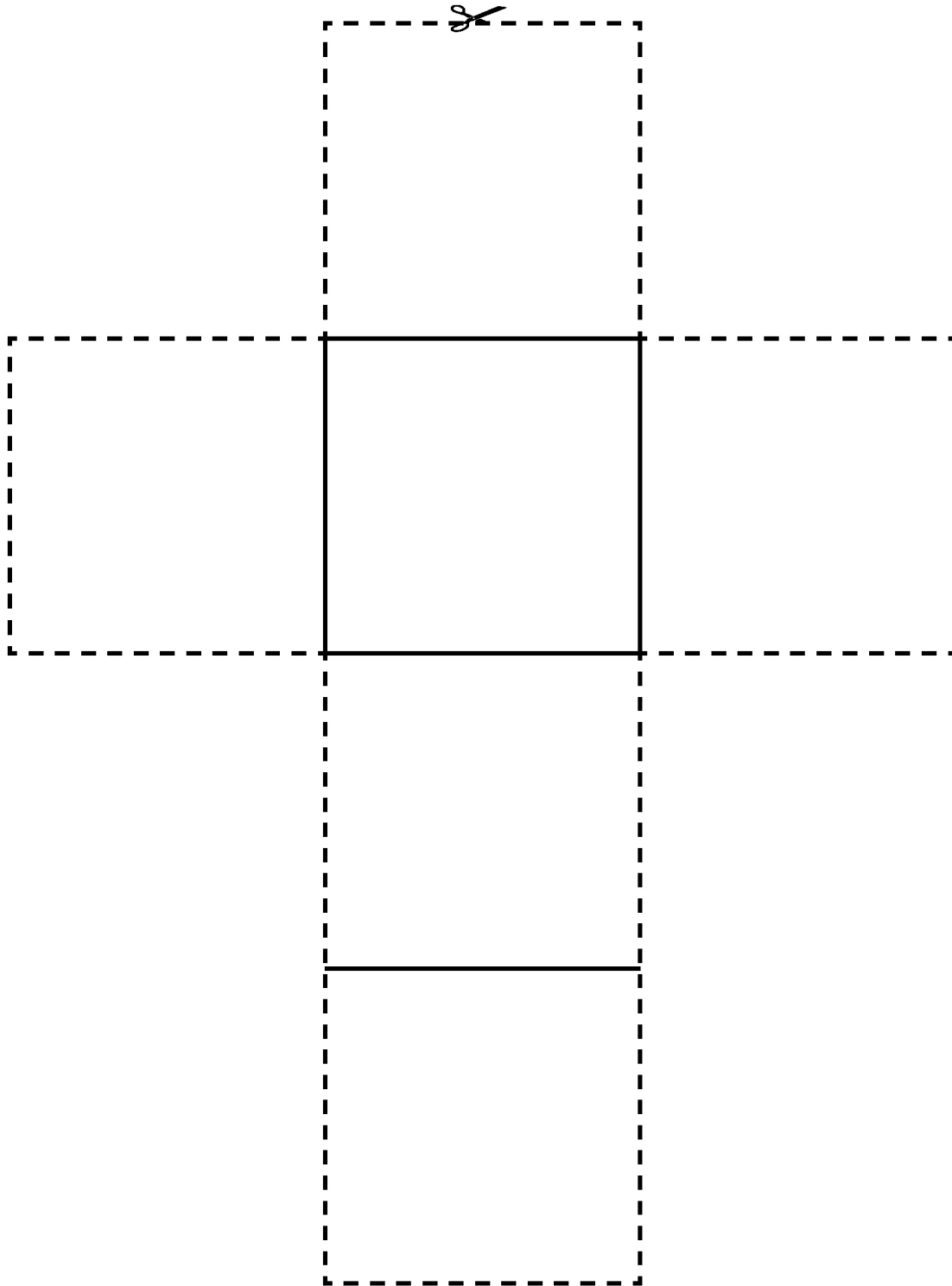
Line Master 7

Name: _____

Draw what you think the box looks like when open flat.
Label shapes and include fold lines.

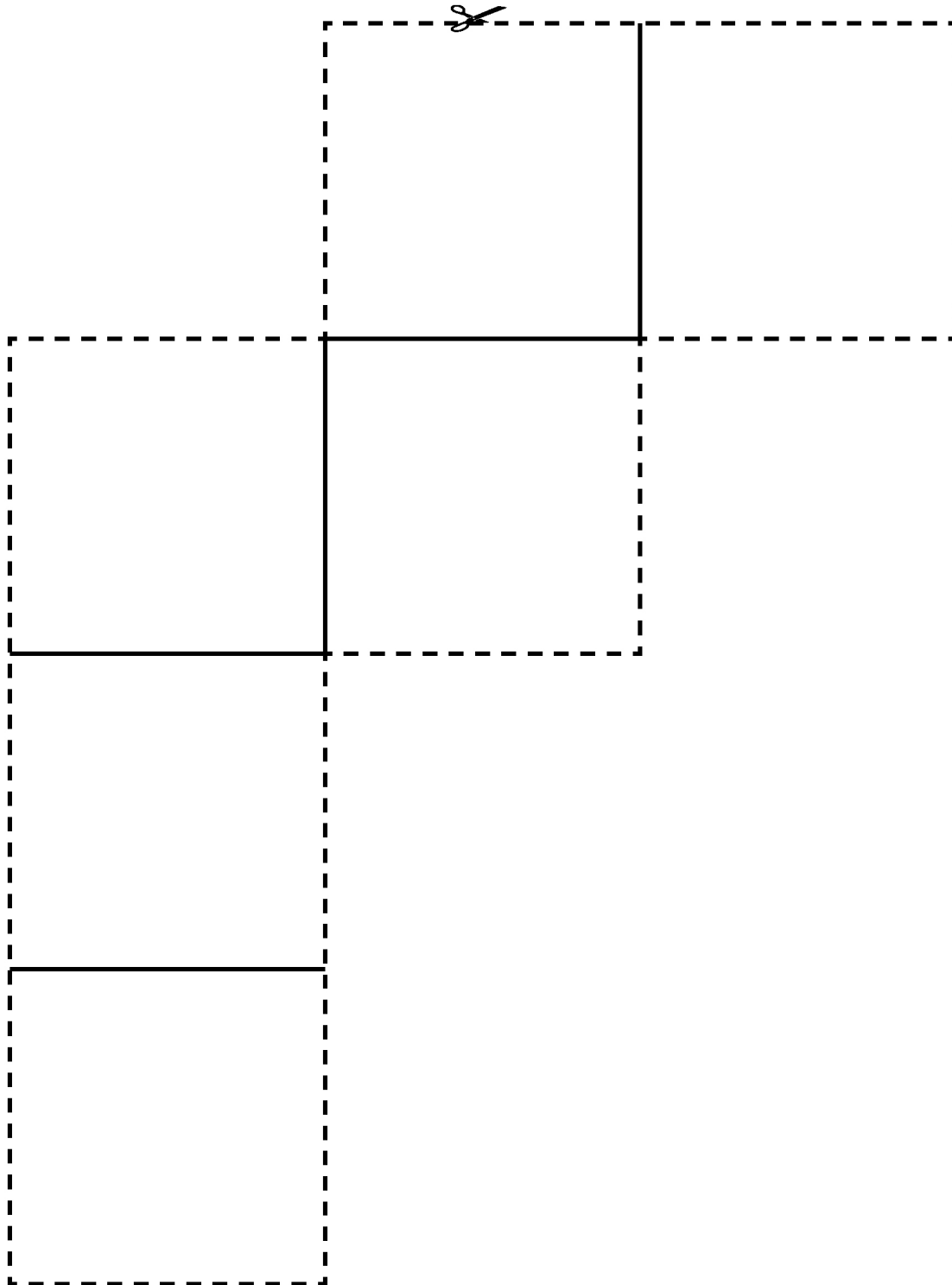
Is It a Net?

Line Master 8-1



Is It a Net?

Line Master 8-2

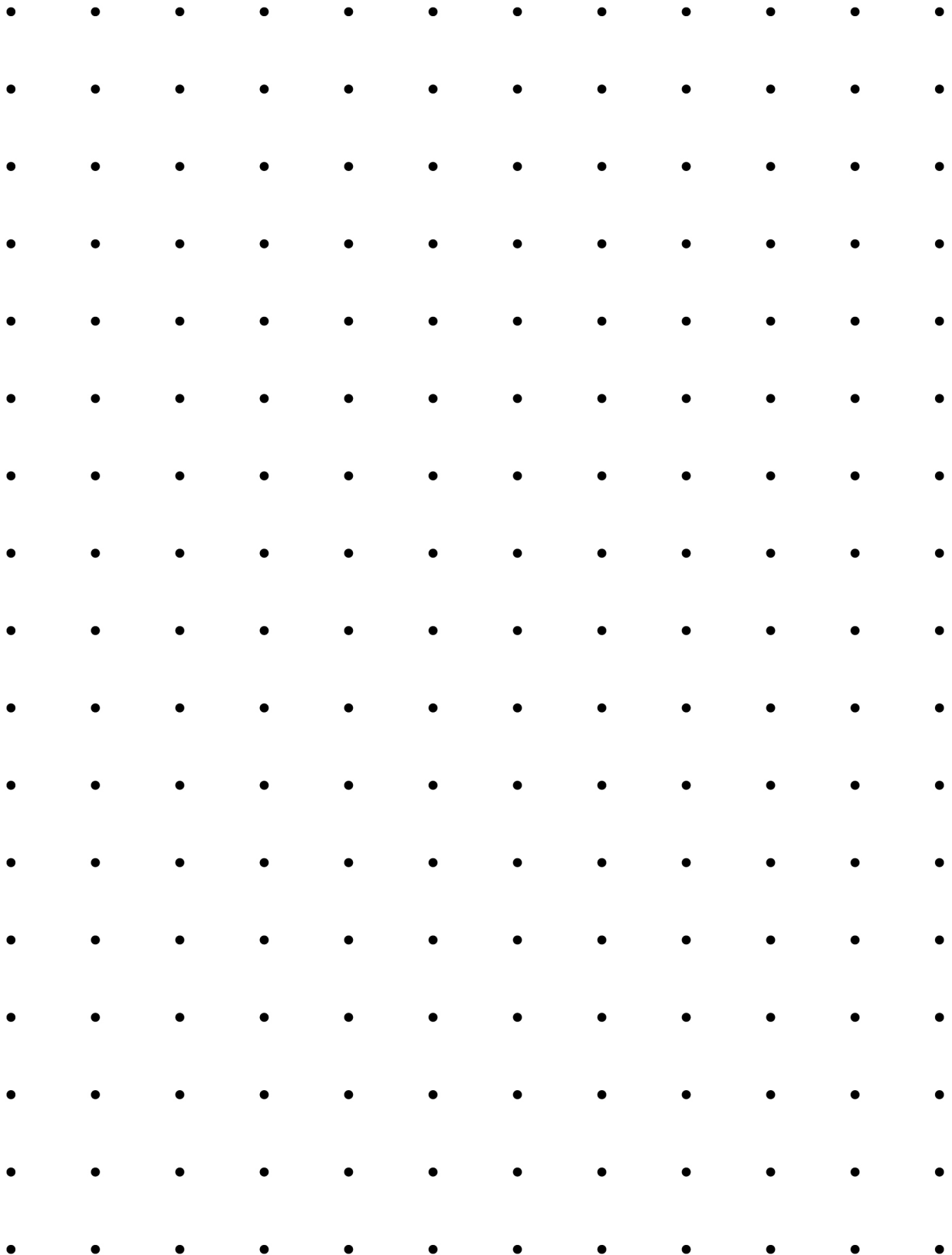


Grid Paper

Line Master 9

Dot Paper

Line Master 10



Drawing Shapes

Line Master 11

Goal of the Game:

To draw shapes that are worth the greatest number of points

What You Need:

- dot paper to share
- 1 pencil each

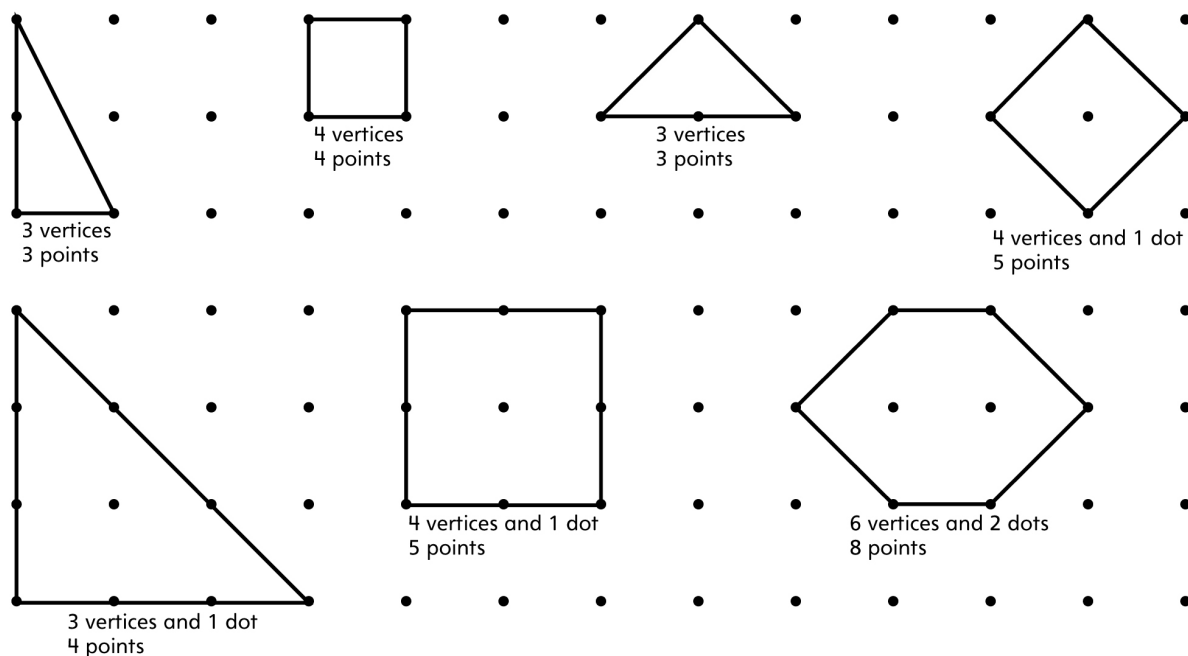
How to Play:

1. Decide who goes first.
2. On your turn, draw a line between any two dots. Your line can go in any direction: vertically, horizontally, or diagonally.
3. If you draw a line that completes a shape, write your initials in the shape and then take another turn. Lines and shapes must not overlap.
4. Keep playing until there is no space left to draw shapes.
5. Calculate your score.

Scoring:

1. For each shape you completed, count and record the number of vertices. You get 1 point for each vertex.
2. For each shape that has dots in the middle, add 1 extra point to your score.

Examples:



Shape Challenges

Line Master 12-1

<p>Build IT!</p> <p>This model has:</p> <p>4 vertices</p> <p>4 triangular faces</p> <p>6 edges</p>	<p>Build IT!</p> <p>This model has:</p> <p>8 vertices</p> <p>6 square faces</p> <p>12 edges</p>
<p>Build IT!</p> <p>This model has:</p> <p>6 vertices</p> <p>3 rectangular faces and 2 triangular faces</p> <p>9 edges</p>	<p>Build IT!</p> <p>My model has:</p> <p>_____ vertices</p> <p>_____ square faces</p> <p>_____ edges</p>

Shape Challenges

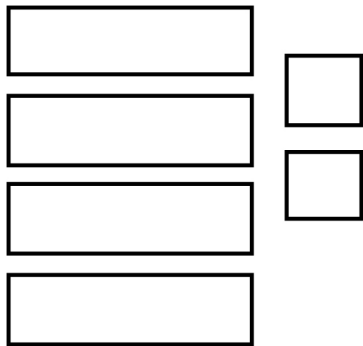
Line Master 12-2

<p>Draw IT!</p> <p>This shape has:</p> <p>4 sides</p> <p>all sides the same length</p> <p>Label your shape.</p>	<p>Draw IT!</p> <p>This shape has:</p> <p>3 sides</p> <p>2 sides the same length</p> <p>Label your shape.</p>
<p>Draw IT!</p> <p>This shape has:</p> <p>6 sides</p> <p>no sides the same length</p> <p>Label your shape.</p>	<p>Draw IT!</p> <p>This shape has:</p> <p>_____ sides</p> <p>_____</p> <p>Label your shape.</p>

Shape Challenges

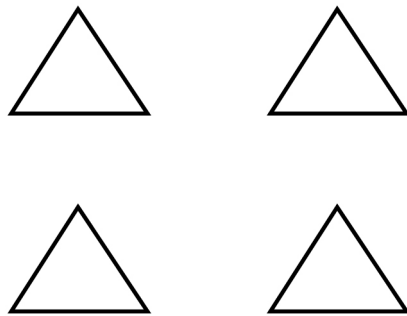
Line Master 12-3

What can you make with these?



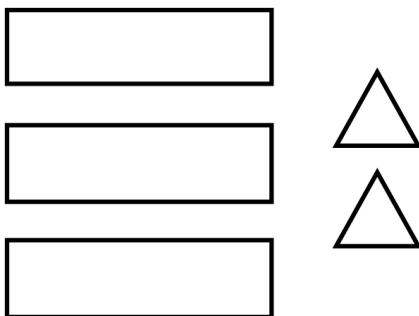
Sketch and label your answer.

What can you make with these?



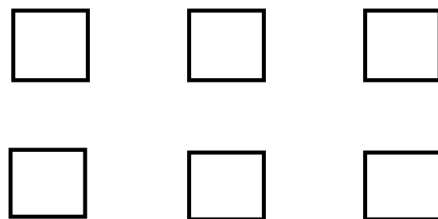
Sketch and label your answer.

What can you make with these?



Sketch and label your answer.

What can you make with these?



Sketch and label your answer.

Gallery Tour

Line Master 1 (Assessment Master)

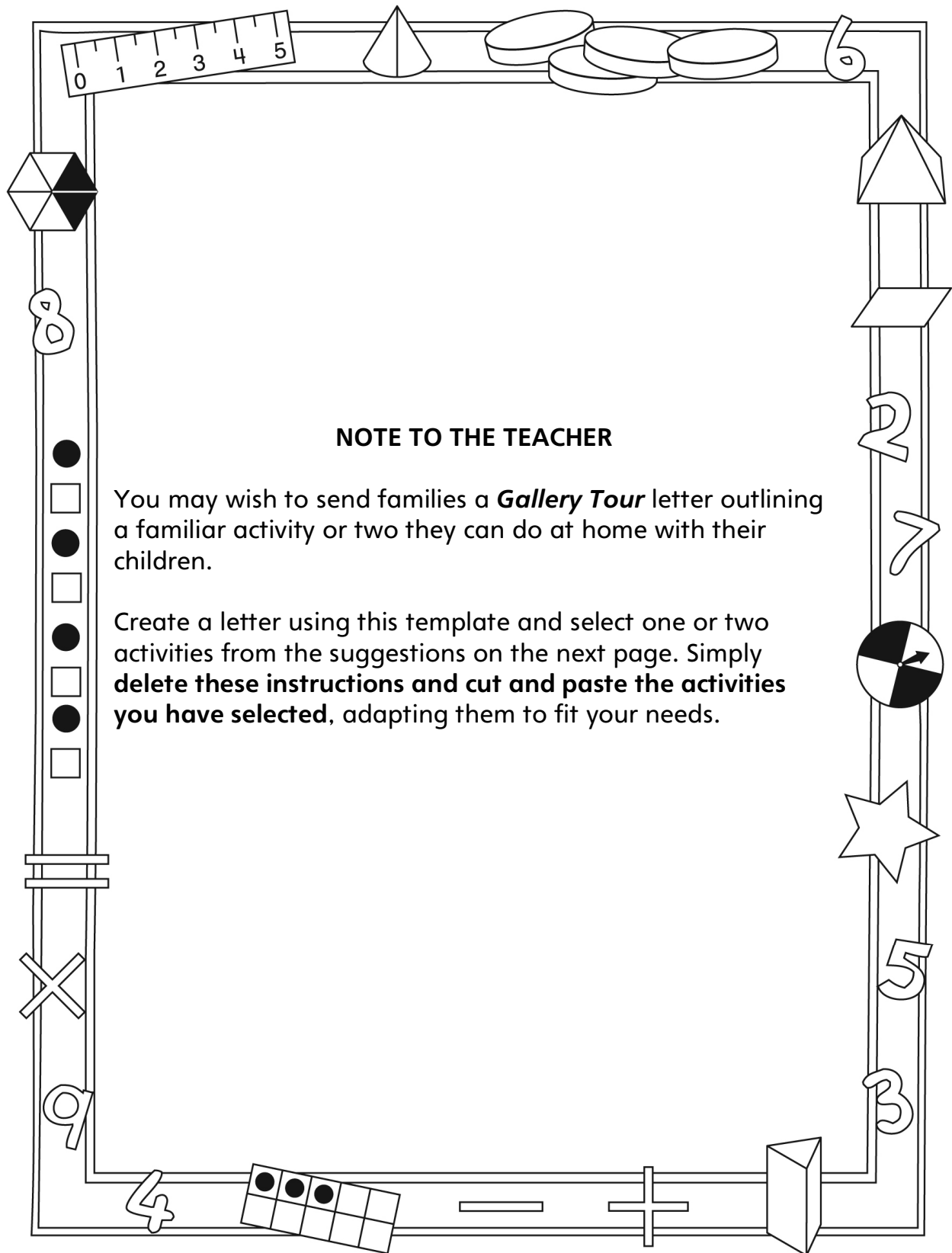
Name: _____

Describe and Compare Transformations	Not observed	Sometimes	Consistently
Identifies 2-D shapes that have symmetry			
Identifies lines of symmetry			
Constructs and completes 2-D symmetrical designs			
Describes and performs transformations (slides, flips, turns)			
Identify, Describe, and Compare 2-D Shapes			
Names 2-D shapes within an image			
Describes and compares properties of 2-D shapes (number of sides and angles)			
Identifies and compares lines and angles			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

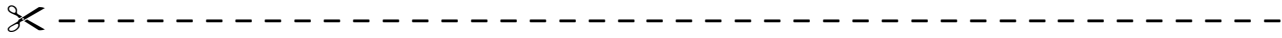
You may wish to send families a *Gallery Tour* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

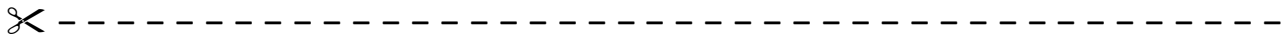
Connecting Home and School Line Master 2-2

Dear Family:

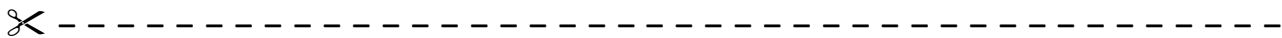
We have been working on **Gallery Tour**, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Shapes and solids can be transformed in many ways.” Particular focus is placed on identifying, describing, and comparing 2-D shapes. Try this activity at home with your child.



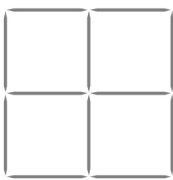
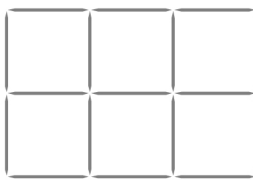
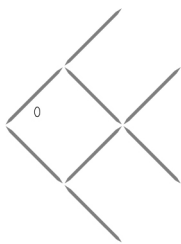
Reading the Story: Ask your child to share what he/she finds to be the most interesting painting in each gallery. Discuss whether you agree with the curator’s choices. Refer to pages 22–23 and talk about how you would arrange the art. Ask: **How would you group the art into different rooms?** Then, consider where the painting on page 24 belongs.

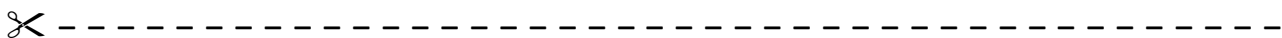


Symmetry Search: We are looking for symmetry and creating a class gallery. Encourage your child to search your home for examples of symmetry. Have your child draw, photograph, and/or list what he/she finds, and bring these findings to add to our exhibit by (date).



Toothpick Puzzles: Enjoy solving these 2-D shape puzzles with your child. Talk about the number of sides, angles, and shapes in the puzzle before moving or removing any toothpicks. Then, talk about what changed when you reach a solution. Together, create your own toothpick puzzle. We look forward to solving it!

		
Take away 2 toothpicks so that there are only 3 squares.	Take away 6 toothpicks so that there are only 2 squares.	Move 3 toothpicks so that the fish swims in the other direction.

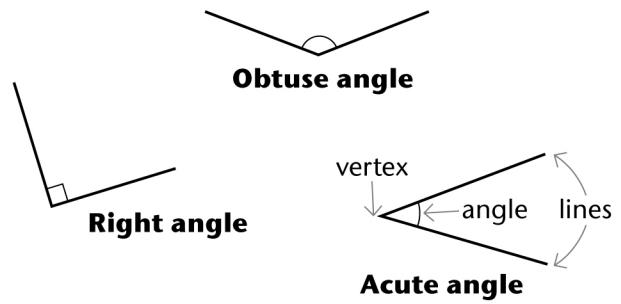


Sincerely,

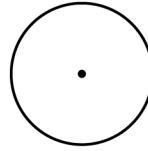
Gallery Tour Math Mat

Line Master 3

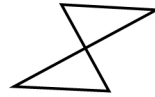
angle: an angle is formed when 2 straight lines meet at a common point, called a vertex.



circle: a 2-D shape formed by all the points that are the same distance from a point called the centre.



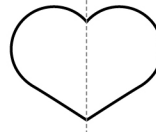
closed figure: a 2-D shape that begins and ends at the same point.



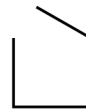
line: a line is always straight and continues endlessly in opposite directions.



line of symmetry: an imaginary line that divides a 2-D shape into 2 halves that match exactly when folded over one another. A shape can have more than one line of symmetry.



open figure: a 2-D shape in which at least one line segment is not connected at an endpoint.



polygon: a closed figure formed by line segments.



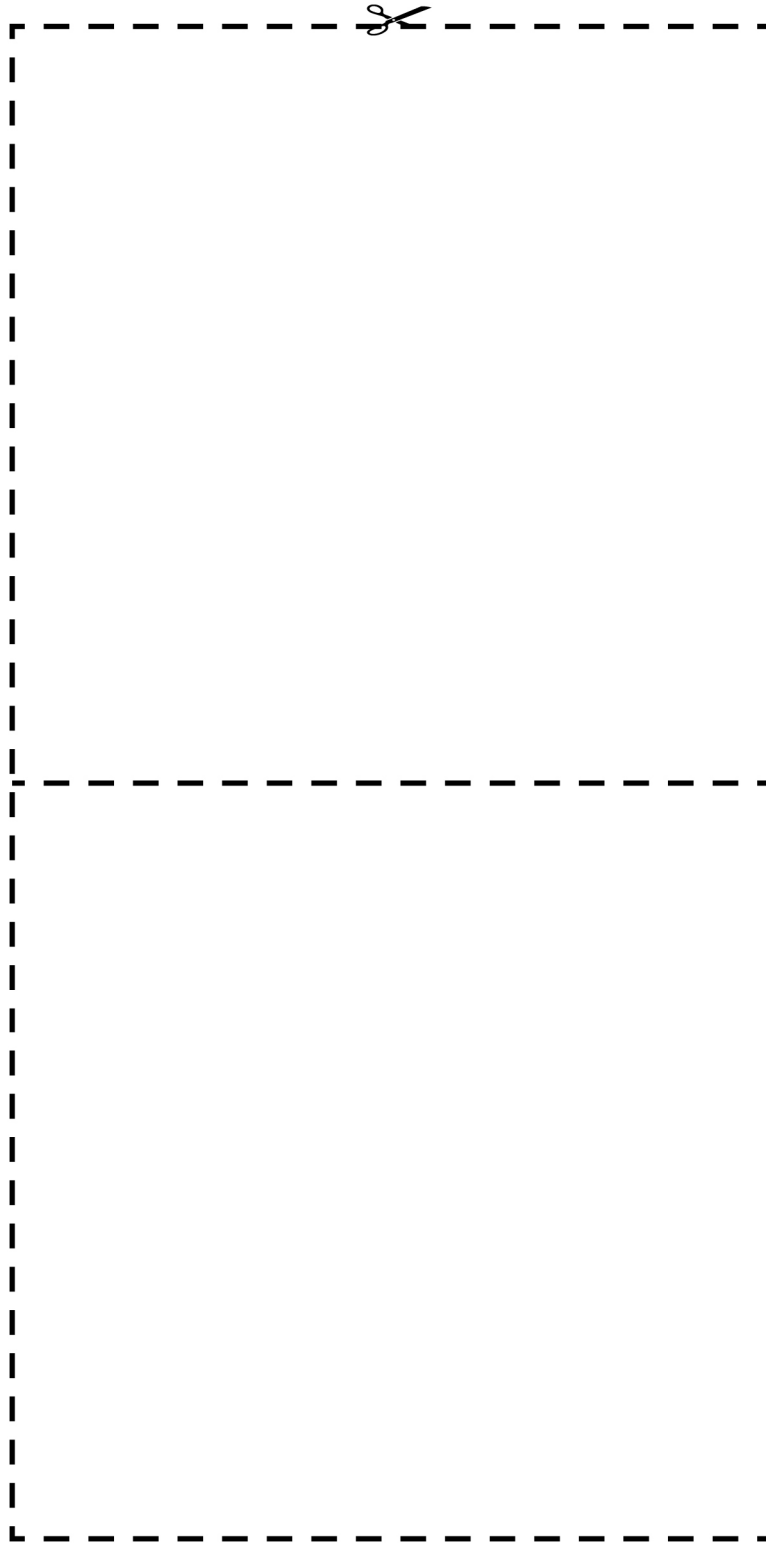
Polygons



Not polygons

Symmetry Surrounds

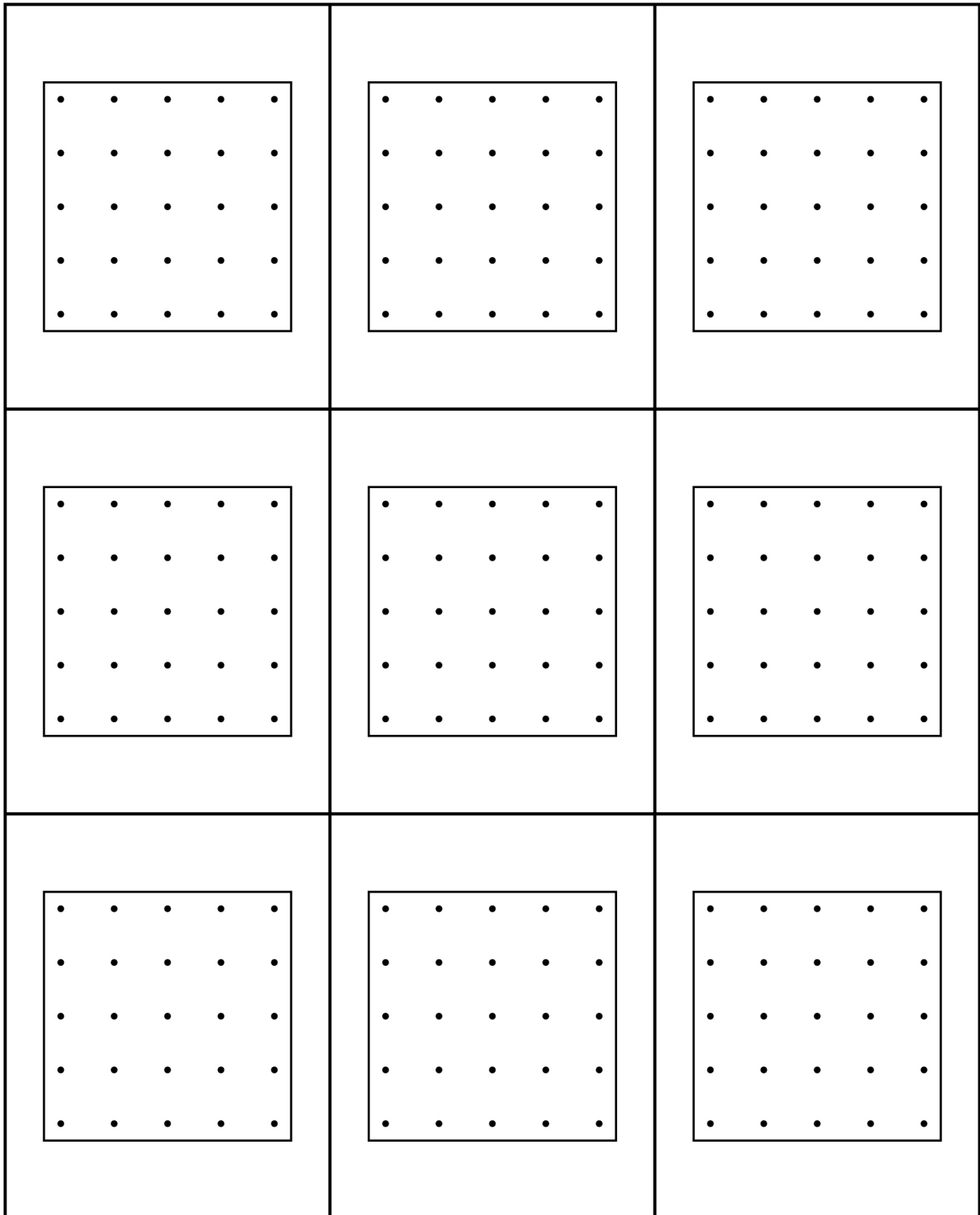
Line Master 4



Geoboard Shapes

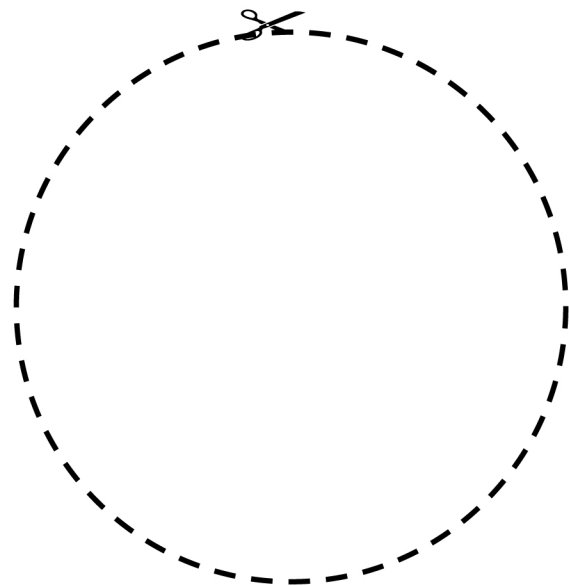
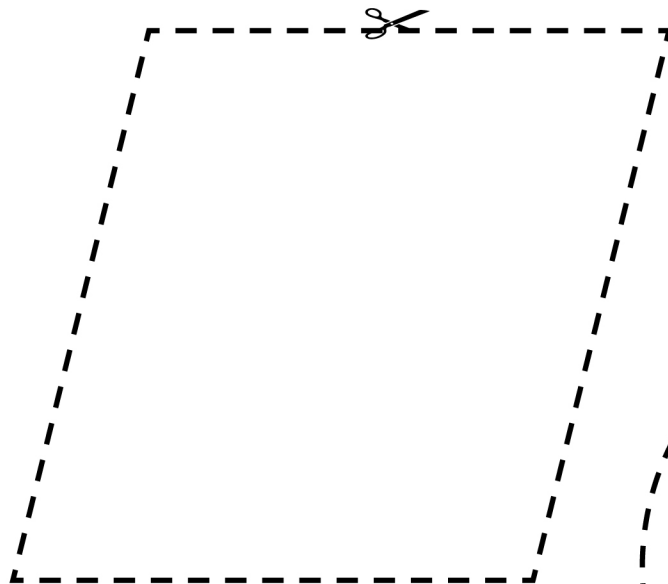
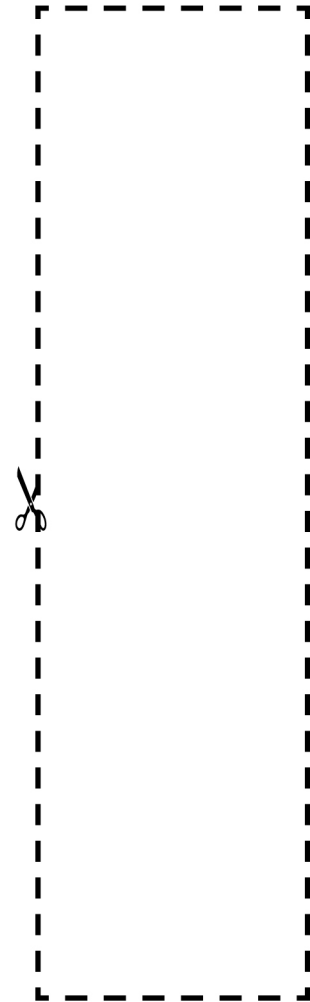
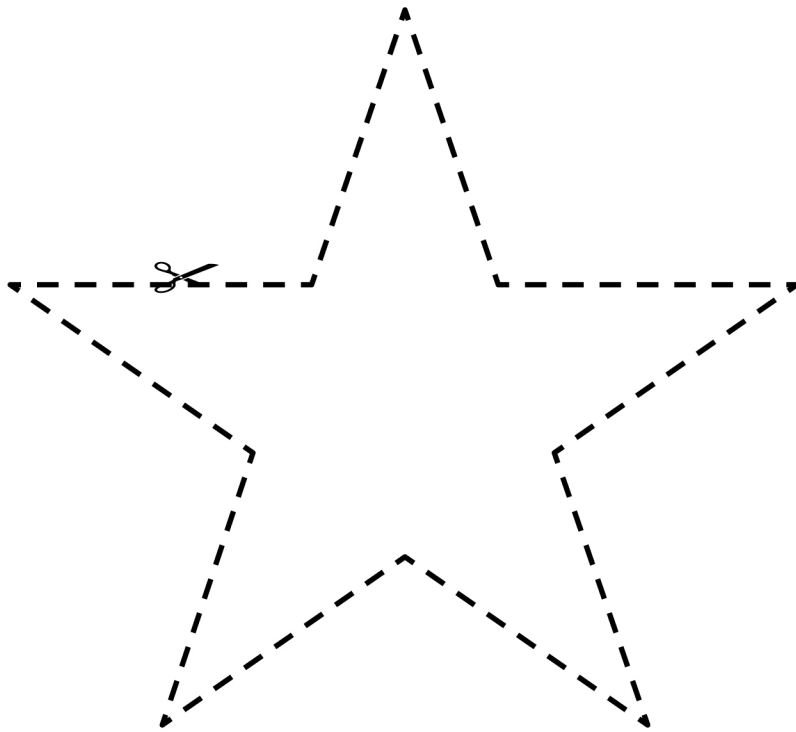
Line Master 5

Name: _____



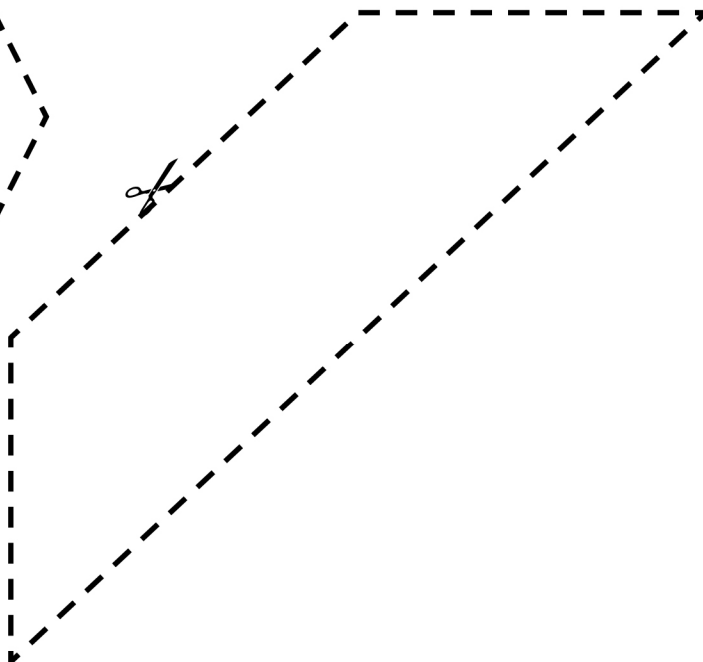
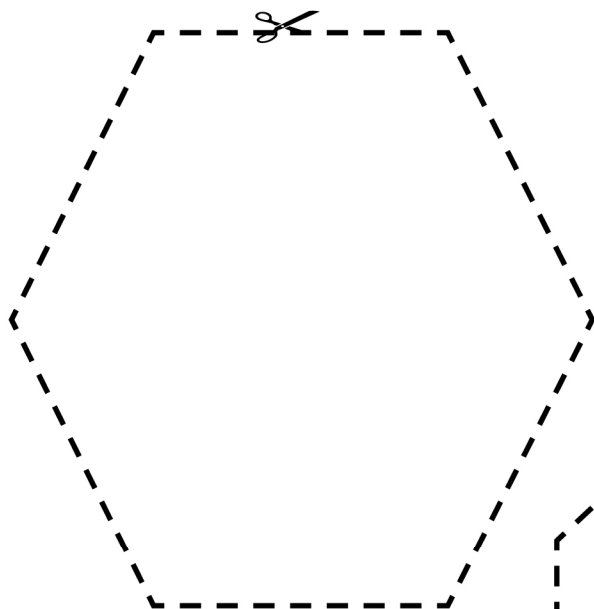
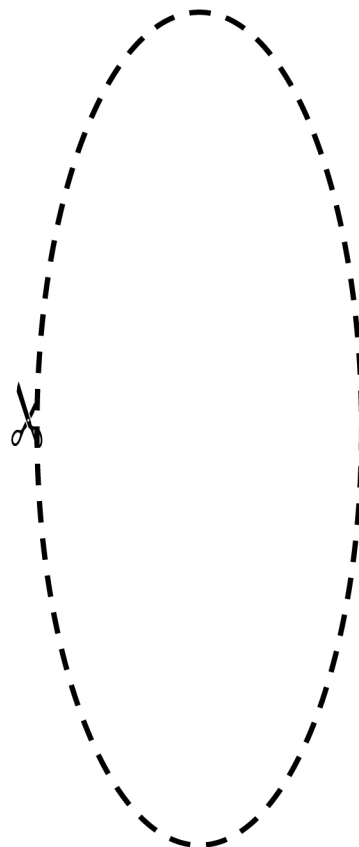
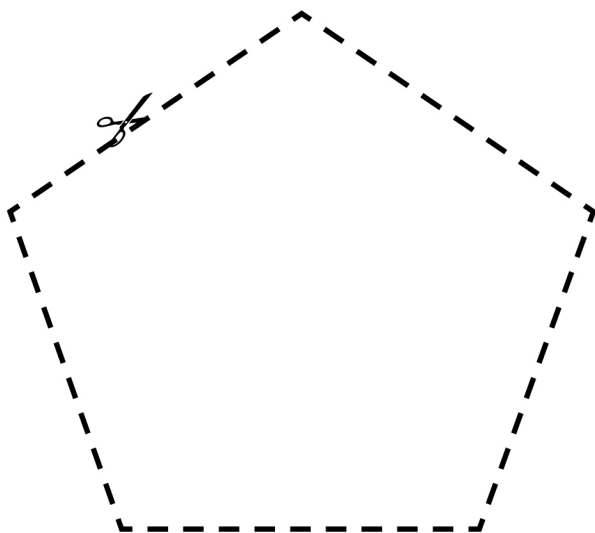
Geometric Shapes

Line Master 6-1



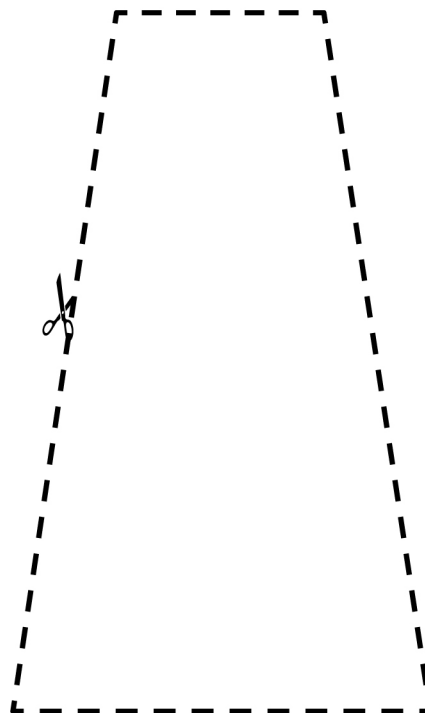
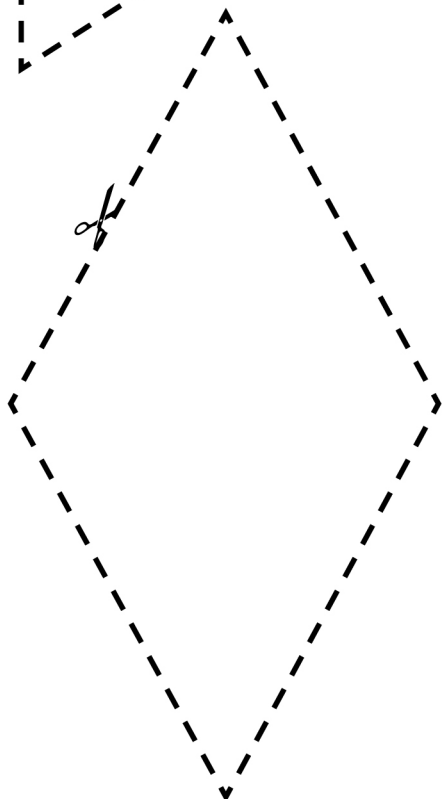
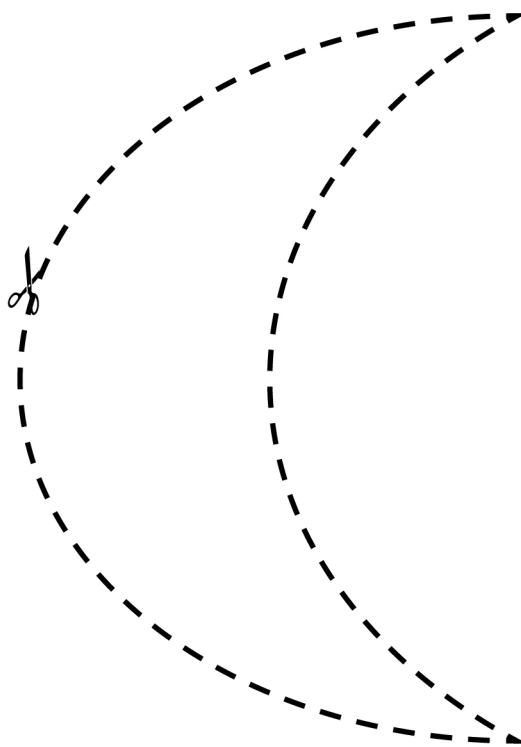
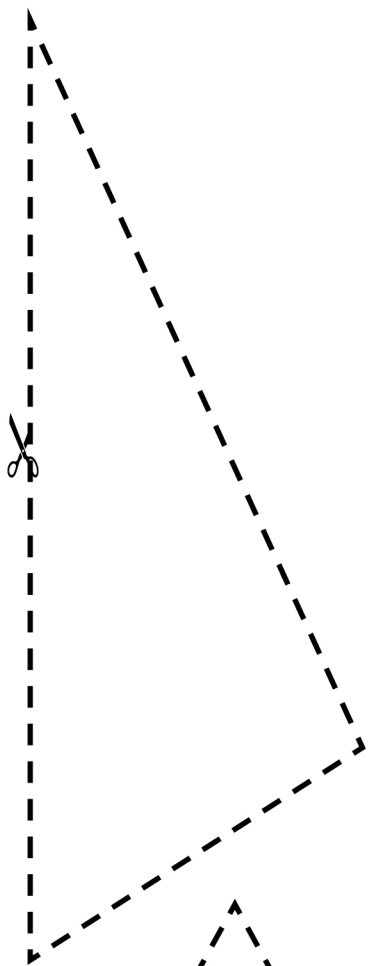
Geometric Shapes

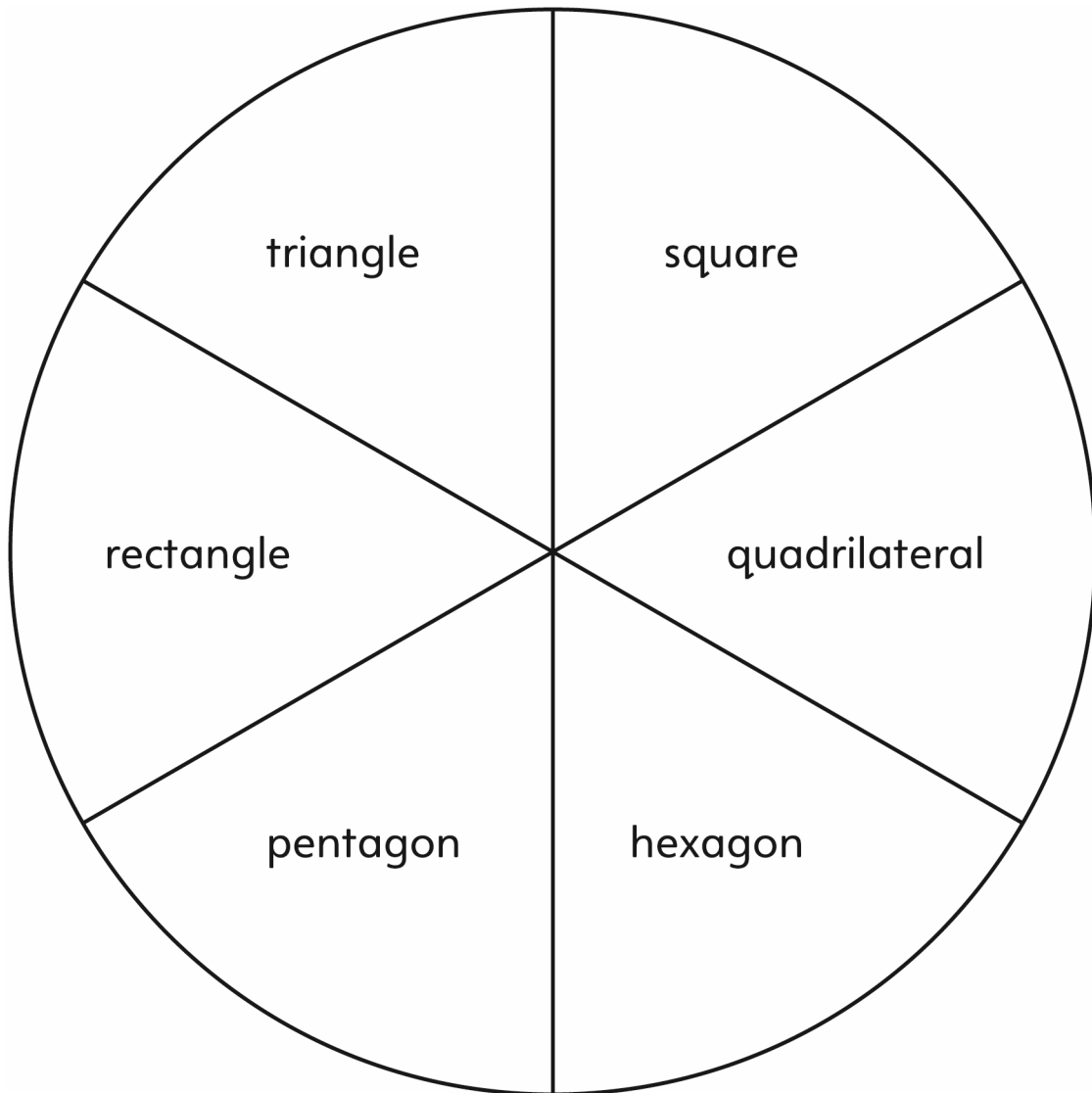
Line Master 6-2



Geometric Shapes

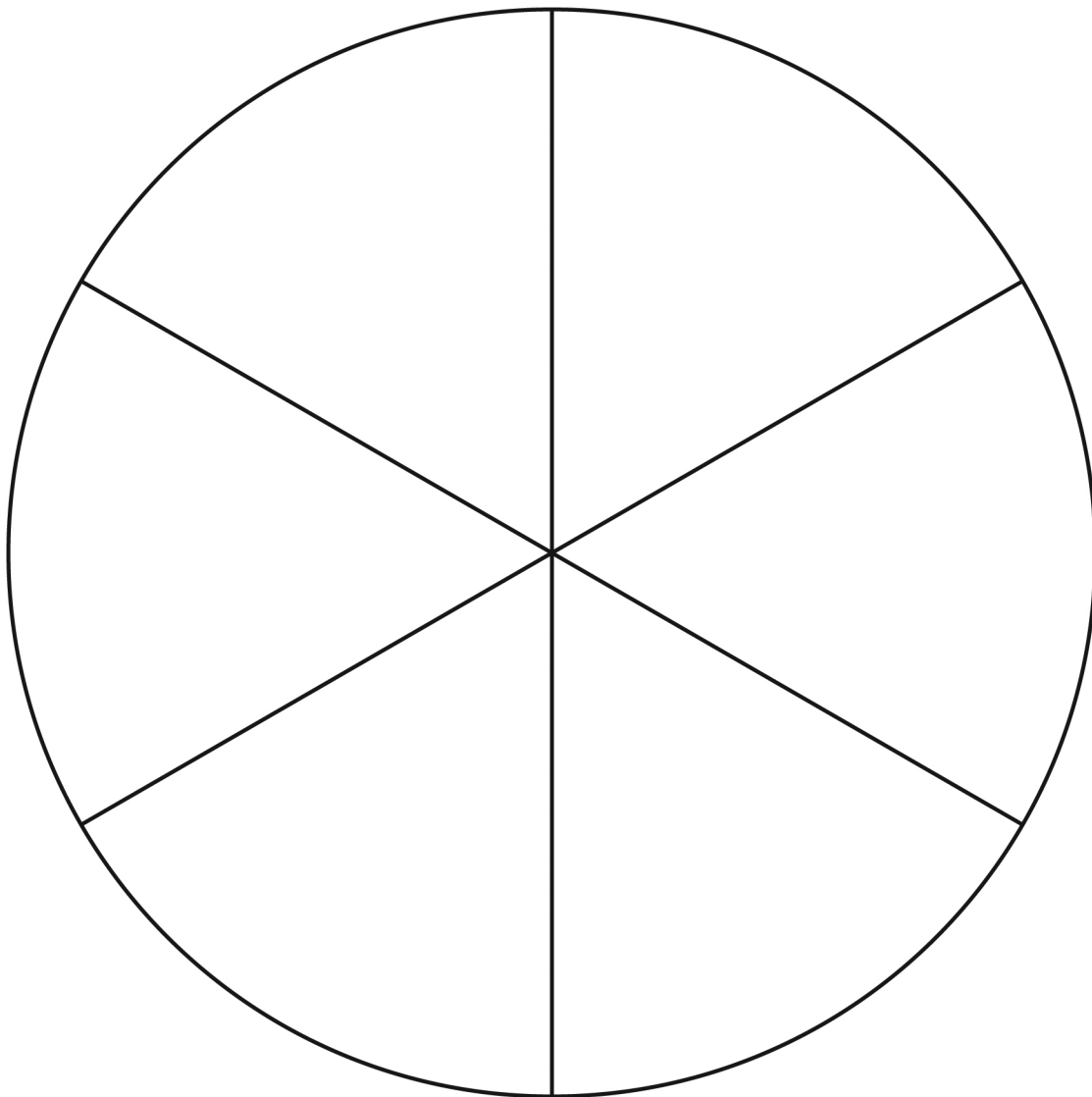
Line Master 6-3





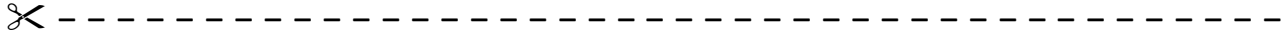
Spinner

Line Master 7-2

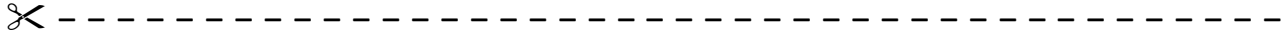


Shape Solutions

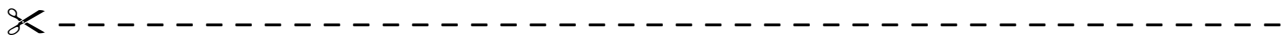
Line Master 8-1



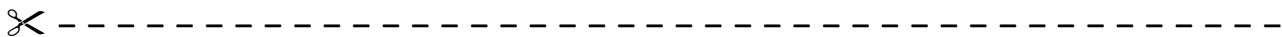
What shape can you make that has
5 sides and 2 right angles?



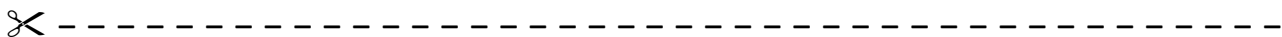
What shape can you make that has
4 sides and 0 right angles?



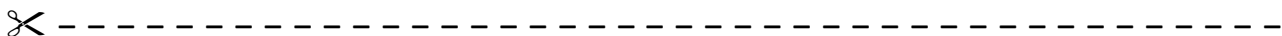
What shape can you make that has
3 sides and 0 right angles?



What shape can you make that has
6 sides with 2 sides that are the same length?



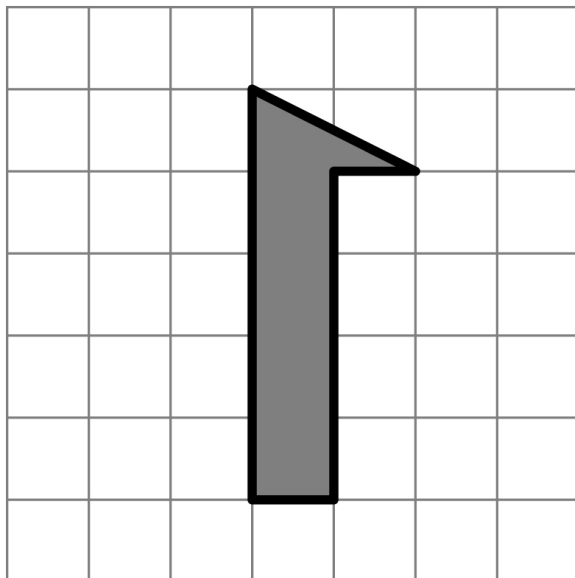
What shape can you make that has
6 sides with 1 right angle?



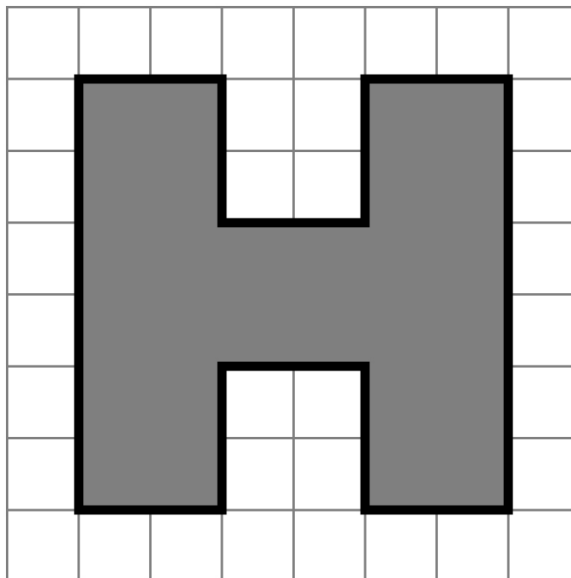
Shape Solutions

Line Master 8-2

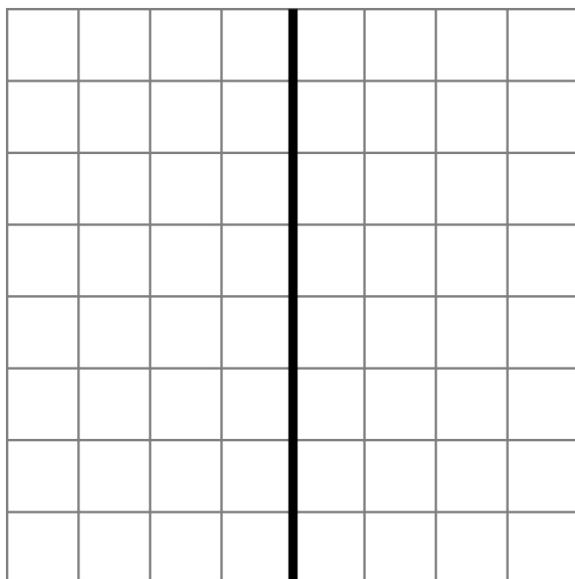
✂ Flip and draw this arrow.



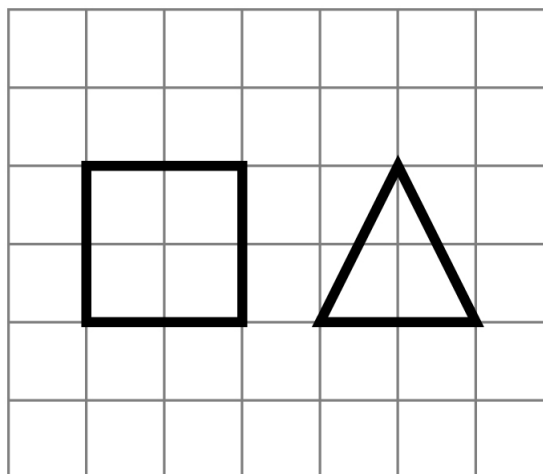
✂ Add lines of symmetry to this H.



There is a line of symmetry. Use it to make a symmetrical image. Include at least 2 squares and 2 triangles.



Draw as many lines of symmetry as you can on each shape.



Welcome to The Nature Park Line Master 1

(Assessment Master)

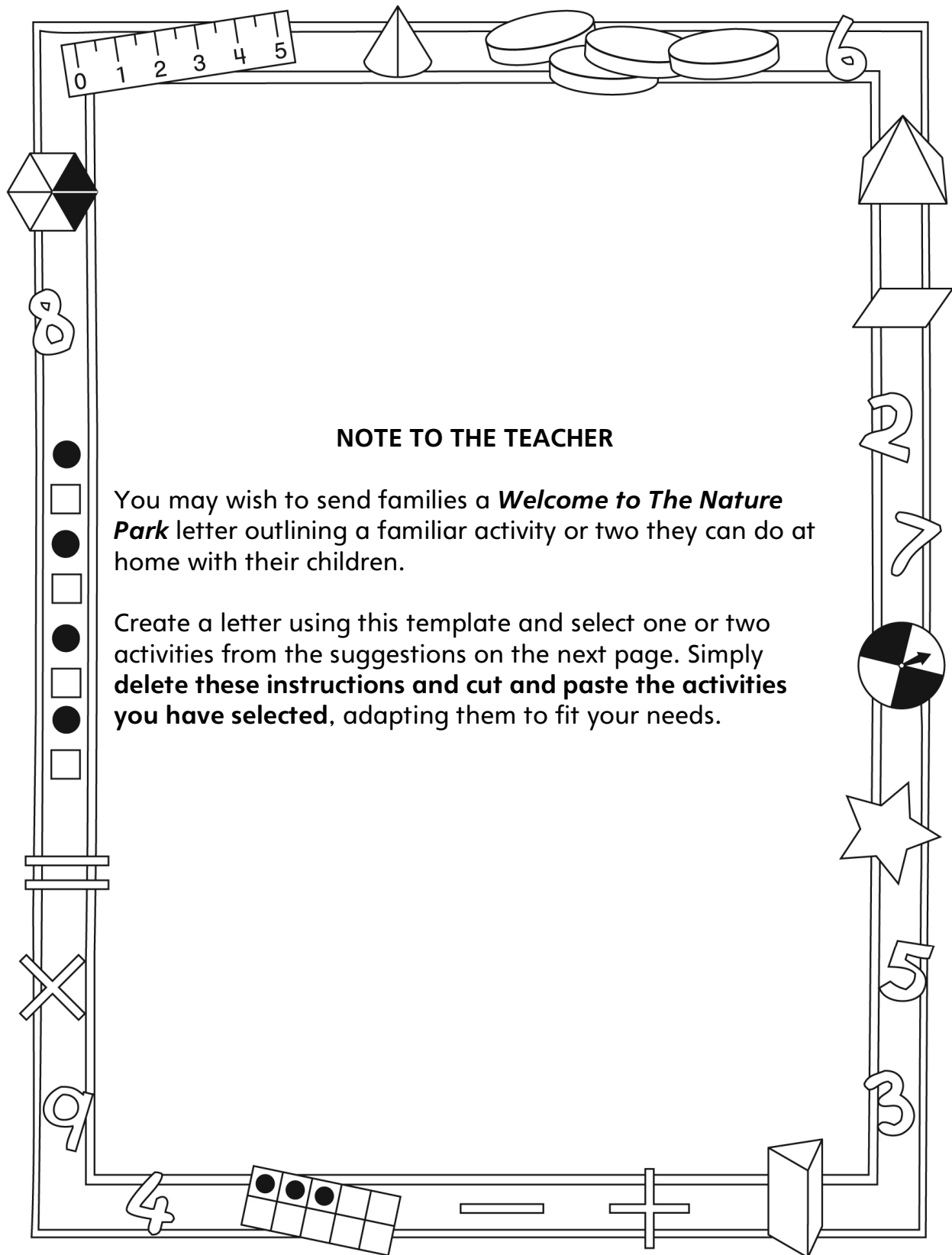
Name: _____

Interpret Charts, Tables, Pictographs, and Bar Graphs	Not observed	Sometimes	Consistently
Reads and interprets information from data displays			
Explains and justifies whether a display used is appropriate for the data collected			
Draw Conclusions from Data Displays			
Poses questions about data collected and displayed			
Answers questions about data collected and displayed			
Makes simple inferences about a population based on sample data collected			
Draws conclusions from charts, tables, and graphs			

Strengths:

Next Steps:

Connecting Home and School Line Master 2-1



NOTE TO THE TEACHER

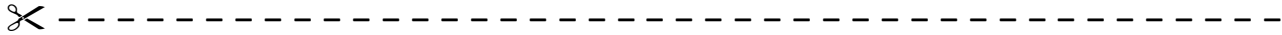
You may wish to send families a *Welcome to The Nature Park* letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

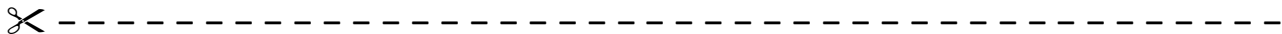
Connecting Home and School Line Master 2–2

Dear Family:

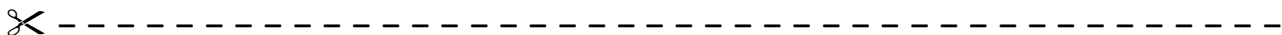
We have been working on **Welcome to The Nature Park**, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Collecting and displaying data can help us predict and interpret situations.” Particular focus is placed on interpreting charts, tables, pictographs, and bar graphs, and drawing conclusions based on data displays. Try this activity at home with your child.



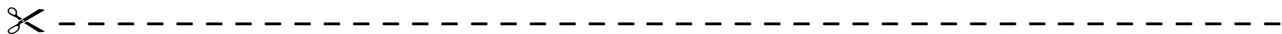
Reading the Story: As you read the story, enjoy talking about the various ways information is displayed and what you learn from the graphs. After you read, you might ask some questions about objects in your home that could be shown on a graph (e.g., stuffed toys and toys with wheels; different genres of books).



Say Something! With your child, decide on 4 categories for a graph (e.g., 4 types of sports, 4 ice cream flavours) and assign a different symbol to each category. Roll a number cube to determine how many are in each category. Use a copy of the Math Mat (see the inside back cover of the book) to create your graph. Then, take turns saying something about the graph (e.g., “More people like soccer than swimming,” “9 people voted in this survey”) until you run out of things to say. The last person to be able to come up with something to say about the graph is the winner.

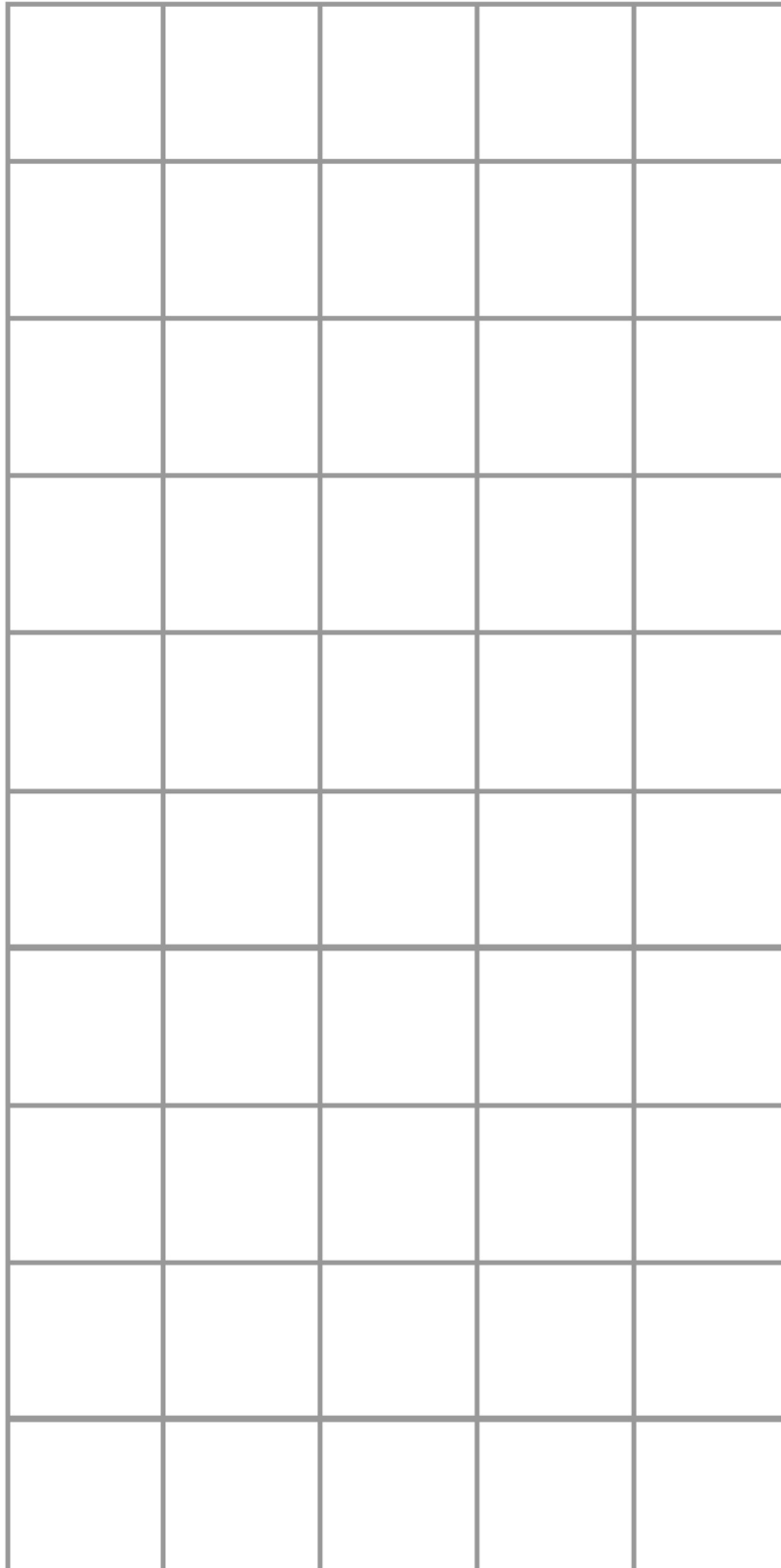


Newsworthy: Look through newspapers and magazines to find simple graphs on an appropriate topic for your child. Read and discuss the content of these graphs with your child, drawing conclusions and making inferences based on the graphs.



Sincerely,

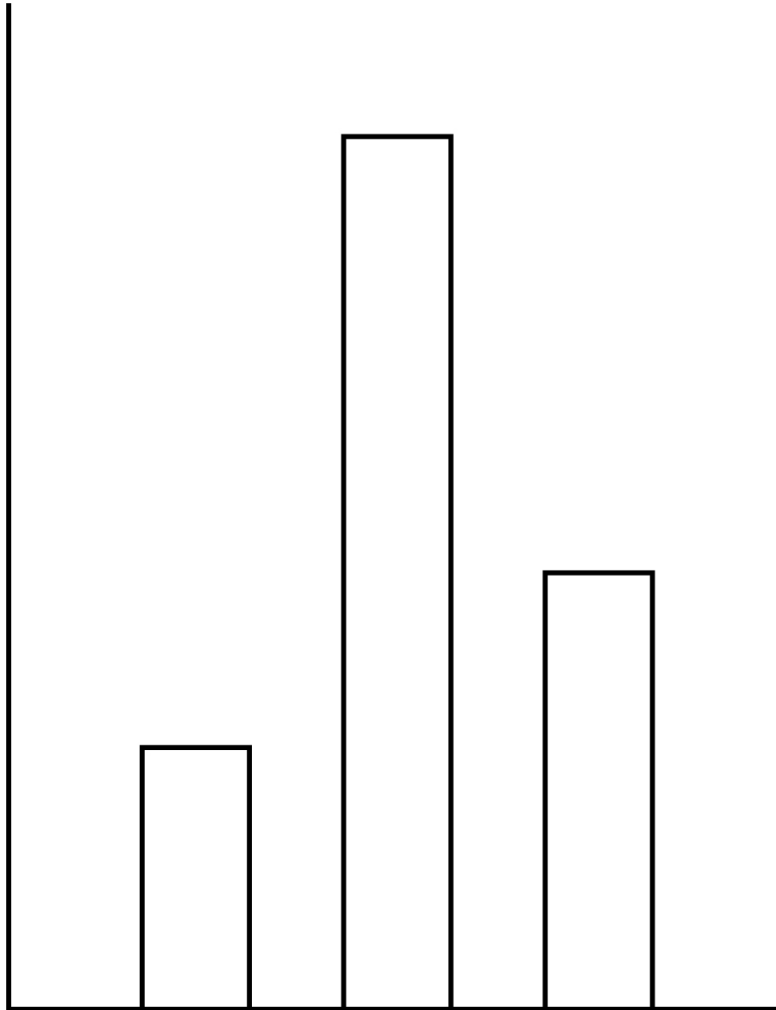
Welcome to *The Nature Park* Line Master 3 Math Mat



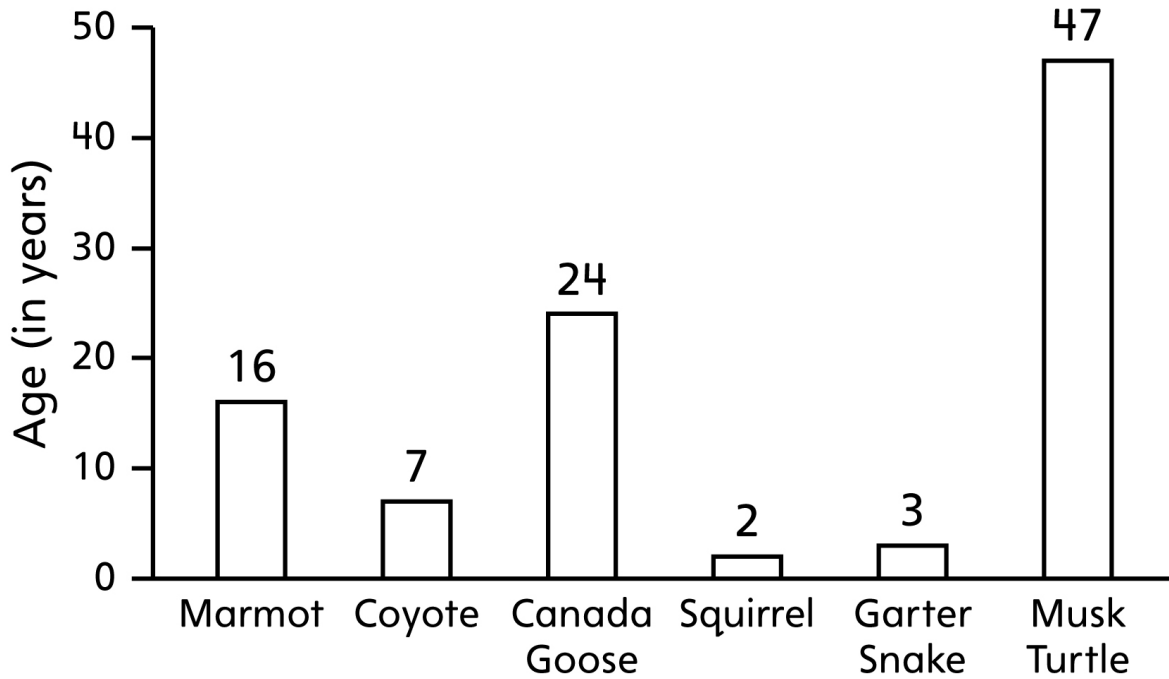
The Big Graphing Oops!

Line Master 4

Name: _____



Animal Lifespan



Animal Lifespan

Marmot	Coyote	Canada Goose	Squirrel	Garter Snake	Musk Turtle






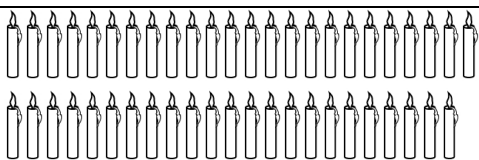
The Best Way

Line Master 5-2

Animal Lifespan

Animal	Lifespan in Years
Marmot	16
Coyote	7
Canada Goose	24
Squirrel	2
Garter Snake	3
Musk Turtle	47

Animal Lifespan

Animal	Lifespan in Years
Marmot	
Coyote	
Canada Goose	
Squirrel	
Garter Snake	
Musk Turtle	

The Best Way

Line Master 5–3

Name: _____

How are the graphs, tables, and charts alike?

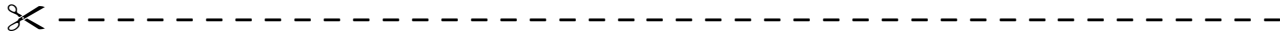
How are they different?

Which one is the easiest to read? Why?

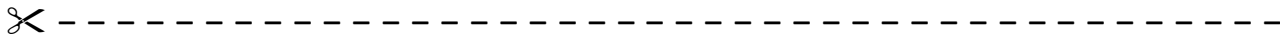
Which ones are harder to make sense of? Explain your thinking.

Digging into Data

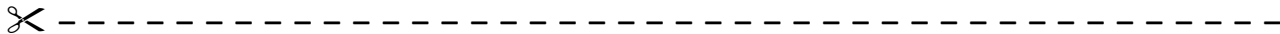
Line Master 6-1

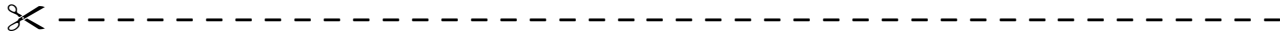


Favourite Fruits for School Snack		
Grapes	Orange	Apple

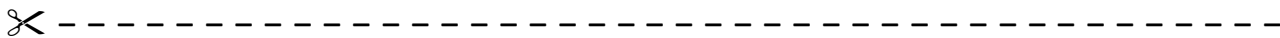
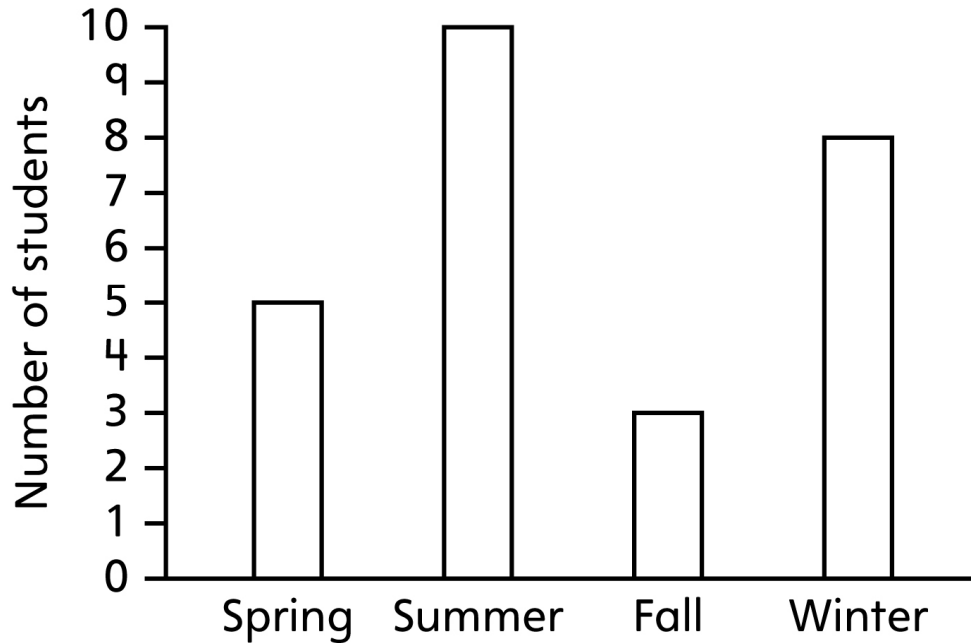


What do we want to do at recess?	
Skip rope	
Play soccer	
Play in playground	

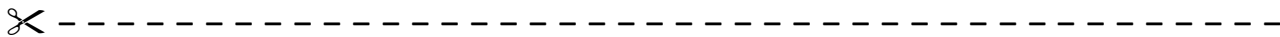




Favourite Season



Where do we want to go on a field trip?	
Museum	/
Aquarium	/
Animal Shelter	/



Digging into Data

Line Master 6–3

✂ -----

What type of information is in this data display?

✂ -----

Which choice was most popular? _____ How did you decide?

✂ -----

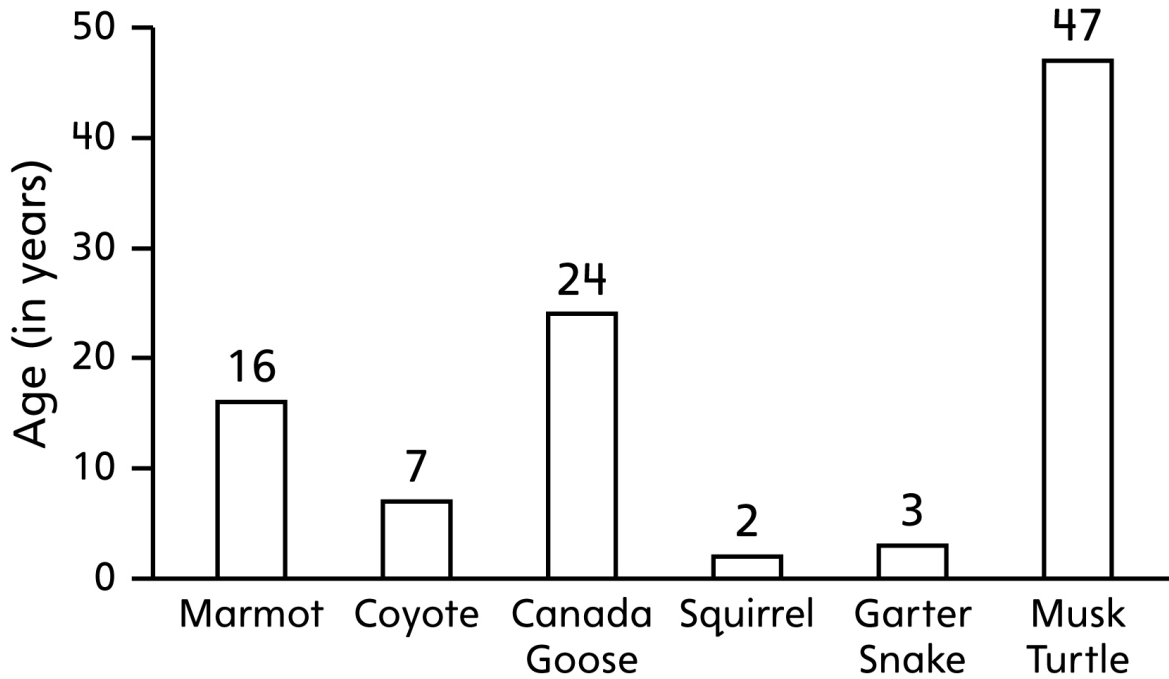
What is another question you can ask about the information in this data display? What is the answer to your question? How did you decide?

✂ -----

How can you use the information from this data display?

✂ -----

Animal Lifespan

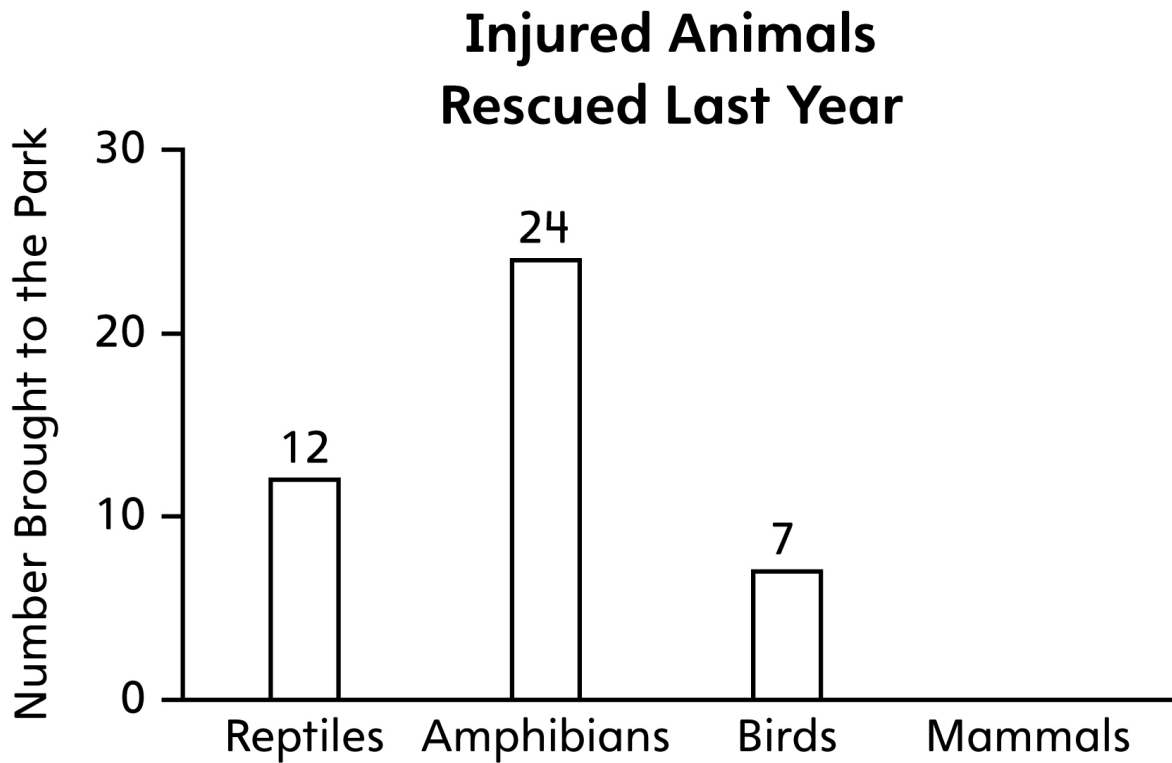


1. How much longer does a marmot live than a coyote?
2. How many years older are you than an old garter snake?
3. Which animal lives about 3 times longer than a squirrel?
4. What question can you ask using this bar graph?

Animal Diets

Animal	Food Type	Food Amount/Day	Number of Meals/Day
Coyote	Meat and fish	1000 grams	1
Turtle	Grubs and worms	250 grams	1
Osprey	Fish only	250 grams	2
Squirrel	Seeds and nuts	100 grams	1
Raccoon	Meat, fish, fruits, and vegetables	500 grams	2

1. How much food does a raccoon eat in 1 day? 3 days?
2. How much food is needed to feed an osprey for 1 week?
3. You have 750 grams of grubs and worms. How many turtles can you feed in 1 day?
4. Which eats more: 10 squirrels or 2 raccoons?
5. Make up a problem of your own using this chart.



1. 61 injured animals were brought to the park last year. How many were mammals? How did you figure it out?
2. Suppose 71 injured animals were brought to the park and the number of reptiles, amphibians, and birds did not change. How many mammals would there be?
3. Suppose 51 injured animals were brought to the park and the number of reptiles, amphibians, and birds did not change. How many mammals would there be?
4. Suppose 100 injured animals were brought to the park and the number of reptiles, amphibians, and birds did not change. How many mammals would there be?
5. Suppose there were twice as many injured mammals as birds brought to the park. How many injured mammals would there be?

Chance

Line Master 1 (Assessment Master)

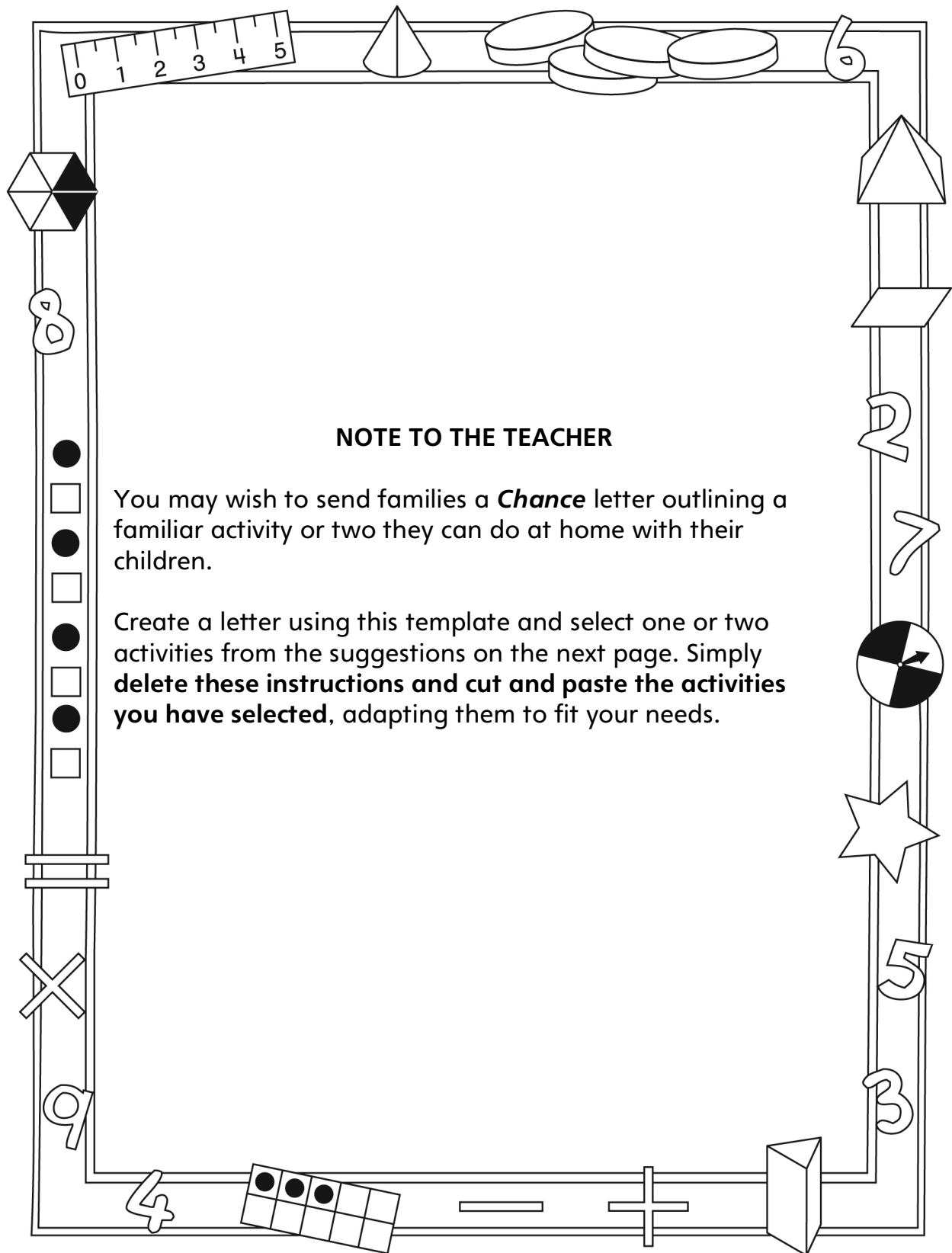
Name: _____

Explore the Likelihood of Different Outcomes	Not observed	Sometimes	Consistently
Makes predictions (based on the question, context, or data presented)			
Predicts the likelihood of an outcome (in simple probability experiments)			
Lists possible outcomes			
Collects data from trials of the same experiment			
Compares data from trials of the same experiment			
Investigate the Fairness of Games			
Formulates questions that can be addressed through multiple trials of simple experiments			
Explains why a game is fair or unfair			
Uses simple experiments to test the likelihood of an event and assess and adjust as needed			

Strengths:

Next Steps:

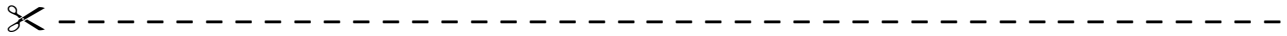
Connecting Home and School Line Master 2-1



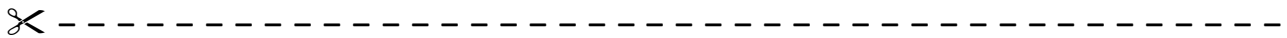
Connecting Home and School Line Master 2–2

Dear Family:

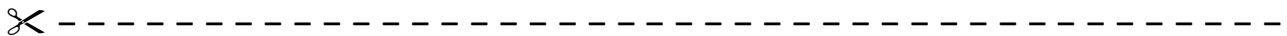
We have been working on **Chance**, which engages children in conversations, investigations, and activities that help to develop their understanding of the big math idea that “Collecting and displaying data can help us predict and interpret situations.” Particular focus is placed on exploring the likelihood of different outcomes, and investigating the fairness of games. Try this activity at home with your child.



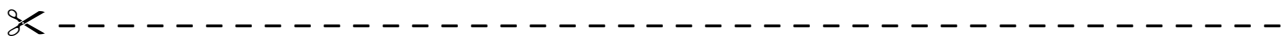
Reading the Story: As you read the story, enjoy talking about the various ways choices are made, and what you learn from the experiments. After you read, you might try some of the experiments yourself, by flipping a coin or drawing small objects from a bag. Have fun reading and re-reading the story and changing the outcomes for Cam as the story progresses.



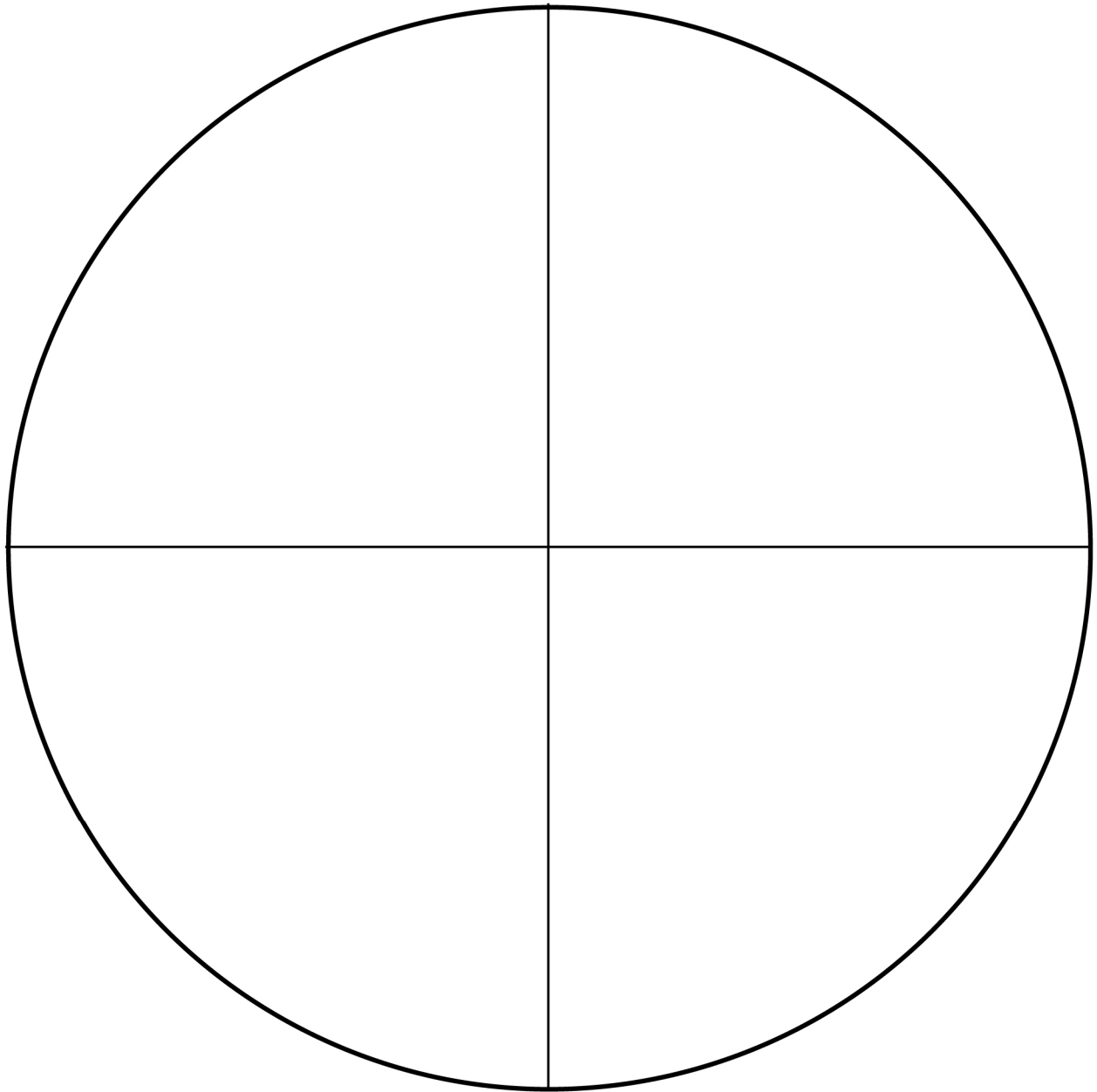
Sum to 7! Sum to 11! With your child, play the game from page 18 of **Chance**. Take turns rolling 2 number cubes and finding the sum. Every time the sum is 11, the first player gets a point. Every time the sum is 7, the second player gets a point. The first player to get 10 points wins. Explore whether this is a fair game.



Making Choices at Home: With your child, flip a coin to choose between two appropriate options at home (e.g., What should we do first: make the bed or get dressed? Should we eat vegetables first or drink milk first?). Talk about the likelihood of things happening.



Sincerely,



Spinner Winner

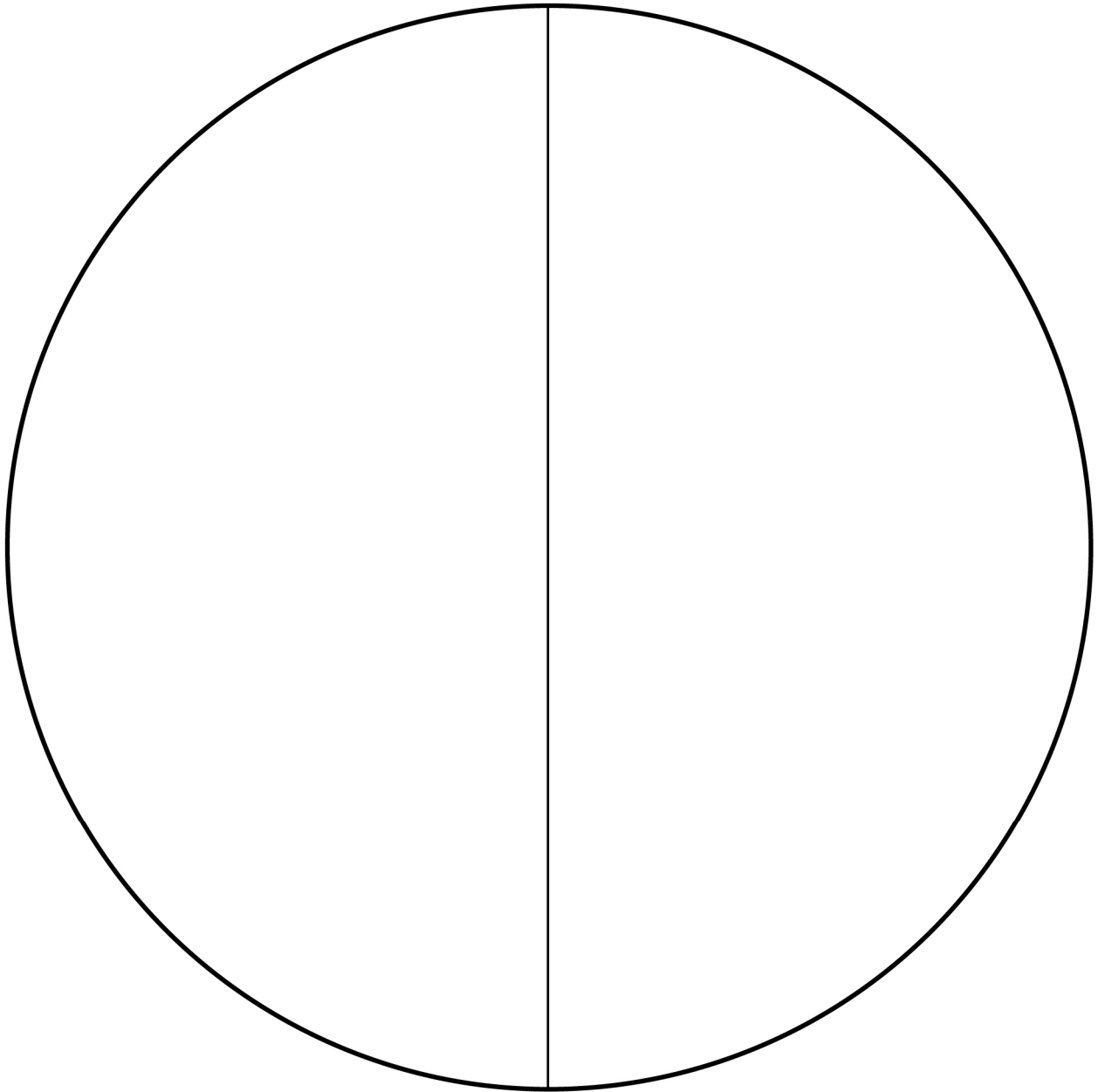
Line Master 4

Name: _____

Turn	I predict the spinner will land on...	The spinner landed on...	Check if your prediction matched what the spinner landed on.
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
Total Number of Correct Predictions			

2-Part Spinner

Line Master 5



Hair Care Double Dare

Line Master 6

Name: _____

Check the colour(s) that you pick in each turn. Add to find the total number you picked of each at the end of 10 turns.

Turn	Red	Blue	Yellow	Green
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
Total of Each Colour				

Odd or Even

Line Master 7

Name: _____

Turn	Number	Is the number odd or even? Circle your answer.	Make a check if you get a point.
1		Odd Even	
2		Odd Even	
3		Odd Even	
4		Odd Even	
5		Odd Even	
6		Odd Even	
7		Odd Even	
8		Odd Even	
9		Odd Even	
10		Odd Even	
Total Number of Points			

Use It or Lose It

Line Master 8

Name: _____

Take turns picking a tile from the bag. Record your score each time.

Yellow: 10 points

Green: 5 points

Blue: 2 points

Red: Change all the points from all the turns you took so far to 0.

Turn	Colour chosen	Points this turn
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Total Number of Points		

Graphing Grid

Line Master 9



Sam has 2 trays of toy cars. On one tray, there are 4 red cars and 6 yellow cars. On the other tray, there is 1 red car, 1 blue car, 2 green cars, and 6 yellow cars. Sam plans to close his eyes and pick a car.

1. If Sam wants a yellow car, which tray gives him the best chance? Use colour tiles in place of the cars on trays. Try the experiment to see.
2. Now make 2 spinners to match the colours on the trays. Use the spinners to see what happens. Did it match what happened with the colour tiles? Why do you think so?



-
1. a) Make a fair game that uses 1 red tile, 5 blue tiles, 3 yellow tiles, 2 green tiles, and a spinner or a number cube.
b) Explain how you know it is a fair game.





Hadley likes apples best. There are three bags of fruit. She is going to reach into a bag and take out the first piece of fruit she touches.

- One bag has 4 apples, 6 pears, and 5 mangoes.
- One bag has 5 apples, 9 pears, and 1 mango.
- One bag has 6 apples, 7 pears, and 3 mangoes.

1. a) In which bag is Hadley more likely to touch an apple first? How do you know? Is it certain?

b) Create an experiment to test your thinking.

What did you find out? How many times did you have to reach in before you got an apple?

2. In which bag is Hadley more likely to touch a mango first?

3. In which bag is Hadley more likely to touch a pear first?



10-Part Spinner

Line Master 11

