

# Indicators of Success for Reading in Mathematics

Goals for students include the following:

- Students can analyze, interpret, and summarize a variety of texts from different mathematical contexts such as the media, picture books, math textbooks, and word problems.
- Students can apply the information they have read to different learning situations.
- Students can make connections between math text and their personal lives.
- Students can make connections between different math texts and identify similarities and differences between them.
- Students are able to interpret and decode the meaning of mathematical symbols, models, and pictures.
- Students are able to apply a variety of strategies to assist them in comprehending the mathematics they read.


# Observation Checklist for Reading in Mathematics

<b>Teacher Comments</b>							
Applies a variety of strategies to comprehend the mathematics he/she reads							
Interprets and decodes mathematical symbols, models, and pictures							
Makes connections between and compares different math texts							
Makes connections between math text and his/her life							
Applies information he/she has read to different learning situations							
Analyzes, interprets, and summarizes texts from different mathematical contexts							
<b>Student Name</b>							

R = Rarely S = Sometimes F = Frequently C = Consistently

## My Math Reading: Word Problems


- Do I read the problem at least two times?
- Do I retell the problem in my own words?
- Do I create pictures in my mind to make the problem clearer?
- Do I relate the problem to my daily life?
- Do I check whether my answer makes sense?

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## Indicators of Success for Understanding Word Problems

- Do I read the whole problem at least two times before working on the math question?
- Do I summarize or retell the problem in my own words before solving it?
- Do I create pictures in my mind to help me understand the problem?
- Do I think about where I may have had a problem like this in my daily life?
- When I complete my answer, do I reread the problem to see whether my work makes sense?

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# Mathematical Picture Book List

N = Number Sense M = Measurement G = Geometry D= (Data Management and Probability) P&A = Patterning and Algebra

Title	Author	Publisher	Year	Level	N	M	G	D	P&A
10 Little Rubber Ducks	Eric Carle	HarperCollins	2005	P	X				X
10 Sleepy Dinosaurs	Wendy E. Auger Ill: Les Drew	Harcourt Canada	2004	P	X				X
12 Ways to Get to 11	Eve Merriam Ill: Bernie Karlin	Aladdin Paperbacks	1996	P	X				X
20 Hungry Piggies: A Number Book	Trudy Harris Ill: Andrew N. Harris	Millbrook Press	2007	P	X				X
A Million Dots	Andrew Clements Ill: Mike Reed	Simon & Schuster Books for Young Readers	2006	P J I	X	X		X	
A Very Improbable Story: A Math Adventure	Edward Einhorn Ill: Adam Gustavson	Charlesbridge	2008	J I				X	
Amanda Bean's Amazing Dream	Cindy Neuschwander	Scholastic Press	1998	P J	X			X	X
Animal Hours	Linda Manning Vlasta Van Kampen	Oxford University Press	1990	PJ	X	X			
Anno's Counting Book	Mitsumasa Anno	HarperCollins	1977	J I	X			X	X
Bats on Parade	Kathi Appelt Ill: Melissa Sweet	Morrow Junior Books	1999	P J	X	X		X	
Bean Thirteen	Matthew McElligott	G.P. Putnam's Sons	2007	P J	X			X	X
Bees, Snails, & Peacock Tails: Patterns and Shapes...Naturally	Betsy Franco Steve Jenkins	Margaret K. McElderry Books	2008	P	X				X
Benny's Pennies	Pat Brisson Ill: Bob Barner	Dragonfly Books	1995	J	X	X			
Biggest, Strongest, Fastest	Steve Jenkins	Houghton Mifflin	1995	P J I	X	X			
Blockhead the Life of Fibonacci	Joseph D'Agnese Ill: John O'Brien	Henry Holt and Company	2010	PJ I	X				
Calendar	Myra Cohn Livingston Ill: Will Hillenbrand	Holiday House	1959; 2007	P	X	X			X

Title	Author	Publisher	Year	Level	N	M	G	D	P&A
Centipede's 100 Shoes	Tony Ross	Henry Holt and Company	2002	P	X				
City by Numbers	Stephen T. Johnson	Puffin Books	1998	P J I	X	X			
Count on Your Fingers African Style	Claudia Zaslavsky Ill: Wangechi Mutu	Writers and Readers Publishing, Inc	1999	P J	X				
Counting on Frank	Rod Clement	Gareth Stevens Publishing	1991	P J I	X	X		X	X
Counting Our Way to the 100th Day!	Betsy Franco Ill: Steven Salerno	Margaret K. McElderry Books	2004	P	X				
Crazy Creatures Counting	Hannah Reidy Ill: Clare Mackie	De Agostino Editions	1996	P	X				
Domino Addition	Lynette Long	Charlesbridge	1993	P J	X				X
Each Orange Had 8 Slices: A Counting Book	Paul Giganti, Jr. Ill: Donald Crews	Greenwillow Books	1992	J	X				
Equal Shmeaqual: A Math Adventure	Virginia Kroll Ill: Philomena O'Neill	Charlesbridge	2005	P	X				
Eye Like Shapes and Patterns	Not given	Play Bac Publishing	2007	P J			X		
Feast for 10	Cathryn Falwell	Clarion Books	1993	P	X				
Fraction Action	Loreen Leedy	Holiday House	1994	J I	X				
Fraction Fun	David A. Adler Ill: Nancy Tobin	Holiday House	2006	P	X				
Go Figure! A Totally Cool Book About Numbers	Johnny Ball	DK Children	2005	J I	X	X	X	X	X
Great Estimations	Bruce Goldstone	Henry Holt and Company, LLC	2006	P J I	X	X		X	X
Greater Estimations	Bruce Gladstone	Henry Holt and Company	2008	P J I	X	X		X	X
Hickory, Dickory, Dock	Robin Miller and Suzanne Duranceau	North Winds Press: Scholastics Canada Ltd.	1992	P		X			
How Hungry are You?	Donna Jo Napoli and Richard Then Ill: Amy Walrod	Atheneum Books for Young Readers	2001	P	X				
I Spy: A Book of Picture Riddles	Riddles: Jean Marzollo Photos: Walter Wick	Scholastic Press	1992	P J I	X	X	X	X	X
I Spy: Numbers in Art	Lucy Micklethwait	HarperCollins	1993	P J I	X		X		
If You Hopped Like a Frog	David M. Schwartz Ill: James Warhola	Scholastic Press	1999	P J I	X	X		X	

Title	Author	Publisher	Year	Level	N	M	G	D	P&A
In the Next Three Seconds	Rowland Morgan III: Rod & Kira Josey	Hamlyn Children's Books	1997	J I	X	X		X	X
Is a Blue Whale the Biggest Thing There Is?	Robert E. Wells	Albert Whitman & Company	1993	P J	X	X			
It's Probably Penny	Loren Leedy	Henry Holt and Company, LLC	2007	J I	X	X		X	
Just a Second	Steve Jenkins	Houghton Mifflin	2011	PJ I	X	X	X		
Marvelous Math: A Book of Poems	Selected by: Lee Bennett Hopkins III: Karen Barbour	Aladdin Paperback	2001	P J I	X	X	X	X	X
Math for All Seasons: Mind-Stretching Math Riddles	Greg Tang III: Harry Briggs	Scholastic Press	2002	P J I	X	X			X
Mathemattickles!	Betsy Franco III: Steven Salerno	Margaret K. McElderry Books	2003	PJ	X			X	
Michael Phelps: How to Train with a T. Rex and Win 8 Gold Medals	Michael Phelps with Alan Abrahamson III: Ward Jenkins	Simon & Schuster Books for Young Readers	2009	P J I	X	X		X	
Minnie's Diner: A Multiplying Menu	Dayle Ann Dodds III: John Manders	Candlewick Press	2004	P J	X			X	
Mom and Dad are Palindromes	Mark Shulman and Adam McCauley	Chronicle Books	2006	P J I	X				
Monster Math	Anne Miranda III: Polly Powell	Harcourt Brace	1999	P J	X				X
More Than One	Miriam Schlein III: Donald Crews	Greenwillow Books	1996	P	X				
Mother Goose Math	Emily Bolam	Puffin Books	1997	P	X	X	X	X	X
My Even Day	Doris Fisher and Dani Sneed III: Karen Lee	Sylvan Dell Publishing	2007	P	X				X
On Beyond a Million: An Amazing Math Journey	David M. Schwartz III: Paul Meisel	Dragonfly Books	1999	P J I	X	X			X
One Grain of Rice: A Mathematical Folktale	Demi	Scholastic Press	1997	J I	X	X		X	X
One Hundred Hungry Ants	Elinor J. Pinczes III: Bonnie MacKain	Houghton Mifflin	1993	J I	X	X		X	
One Is a Snail. Ten Is a Crab: A Counting by Feet Book	April Pulley Sayre and Jeff Sayre III: Randy Cecil	Candlewick Press	2003	P J I	X	X		X	X
One Well: The Story of Water on Earth	Rochelle Strauss III: Rosemary Woods	Kids Can Press	2007	J I	X			X	

Title	Author	Publisher	Year	Level	N	M	G	D	P&A
Piece = Part = Portion: Fractions = Decimals = Percents	Scott Gifford Ill: Shmuel Thaler	Tricycle Press	2003	J I	X	X		X	
Polar Bear Math: Learning about Fractions from Klondike and Snow	Ann Whitehead Nagda and Cindy Bickel	Henry Holt and Company	2004	J I	X			X	X
Quack and Count	Keith Baker	Voyager Books	1999	P	X				
Ten Black Dots	Donald Crews	Greenwillow Books	1968; 1995	P	X				
The 13th Clue	Ann Jonas	Greenwillow Books	1992	P J	X				
The Button Box	Margarette S. Reid Ill: Sarah Chamberlain	Puffin Books	1990	P	X		X	X	X
The Great Divide: A Mathematical Marathon	Dayle Ann Dodds Ill: Tracy Mitchell	Candlewick Books	1999	J I	X			X	X
The Greedy Triangle	Marilyn Burns Ill: Gordon Silveria	Scholastic Inc	1994	P J I		X	X		
The Icky Bug Counting Book	Jerry Pallotta Ill: Ralph Masiello	Charlesbridge	1992	P	X				
The Mirror Puzzle Book	Marion Walter	Tarquin Publications	1985	P J I			X		
The Monster Who Did My Math	Danny Schnitzlein Ill: Bill Mayer	Peachtree Publishers	2007	P J	X		X		
The Mysterious Tadpole	Steven Kellogg	Puffin	1977; 2004	P J	X	X		X	
The Rabbit Problem	Emily Gravett (and a lot of rabbits)	Pan MacMillan	2009	P J I	X	X		X	X
The Real Princess: A Mathematical Tale	Brenda Williams Ill: Sophie Fatus	Barefoot Books	2008	P J	X				
The Warlord's Puzzle: A Mathematical Adventure	Virginia Walton Pilegard Ill: Nicolas Debon	Pelican	2000	J I			X		
The Wishing Club: A Story About Fractions	Donna Jo Napoli Ill: Anna Currey	Henry Holt and Company	2007	P J	X				
The Wonderful Counting Clock	Cooper Edens Ill: Kathleen Kimball	Simon and Schuster	1995	P		X			
Twelve Terrible Things	Marty Kelley	Tricycle Press	2008	P	X				
Used Any Good Numbers Lately?	Susan Allen Jane Lindaman Ill: Vicky Enright	Millbrook Press	2008	P	X				
When a Line Bends... A Shape Begins	Rhonda Gowler Greene Ill: James Kaczman	Houghton Mifflin Company	1997	P			X		



Title	Author	Publisher	Year	Level	N	M	G	D	P&A
Wild Fibonacci: Nature's Secret Code Revealed	Joy N. Hulme III: Carol Schwartz	Tricycle Press	2005	J I	X			X	X

## Word Problem

I bought two cookies yesterday and decided to share them with two friends. How can we share my 2 cookies equally among the 3 of us? How many different ways can we divide the cookies so that each person has the same amount?

## Word Problem

My aunt works for a seed company and asked for my help. I thought you could help me too.

She has bags full of seeds that she needs to organize in groups of 10. She will place each group in an envelope. She needs to know how many envelopes she will need to send seeds to her customers.

Provide each student or group with a small plastic bag full of different quantities of manipulatives to model the seeds (28, 38, 52, 84, and so on). Explain that they need to provide your aunt with a drawing of how the seeds were organized.

## Word Problem

Four children collected 627 pennies.  
They want to share the pennies equally.  
How many pennies will each child get?  
How many pennies will be left over?

How would your answers change if  
there were 5 children?

## Word Problem

I have a large aquarium. I want to spend exactly 100 dollars buying fish. The store where I buy my fish has several kinds. The large green fish cost 10 dollars each. The blue fish cost 20 dollars each, and the small red fish cost 5 dollars each. I want to buy at least one fish of each colour. How many combinations that include each fish can I buy?

## Word Problem

How many different rectangles can you make using tangram pieces?

## Word Problem

I have decided to buy some new running shoes. The pair I want is on sale for 30% off. The shoes now cost 45 dollars.

Next week the shoes go back to their regular price. How much will they be?

## Word Problem

A playground space is being designed for our school. We have 420 metres of fencing. Which kind of shape would create the largest playground?



## Word Problem

I am packing for a vacation.  
I am limited in what I can bring.  
If I bring 3 shirts and 4 pairs of  
pants, how many different outfits  
will I have?

## Math in the Environment



# Math in the Environment



# Math in the Environment



# Math in the Environment

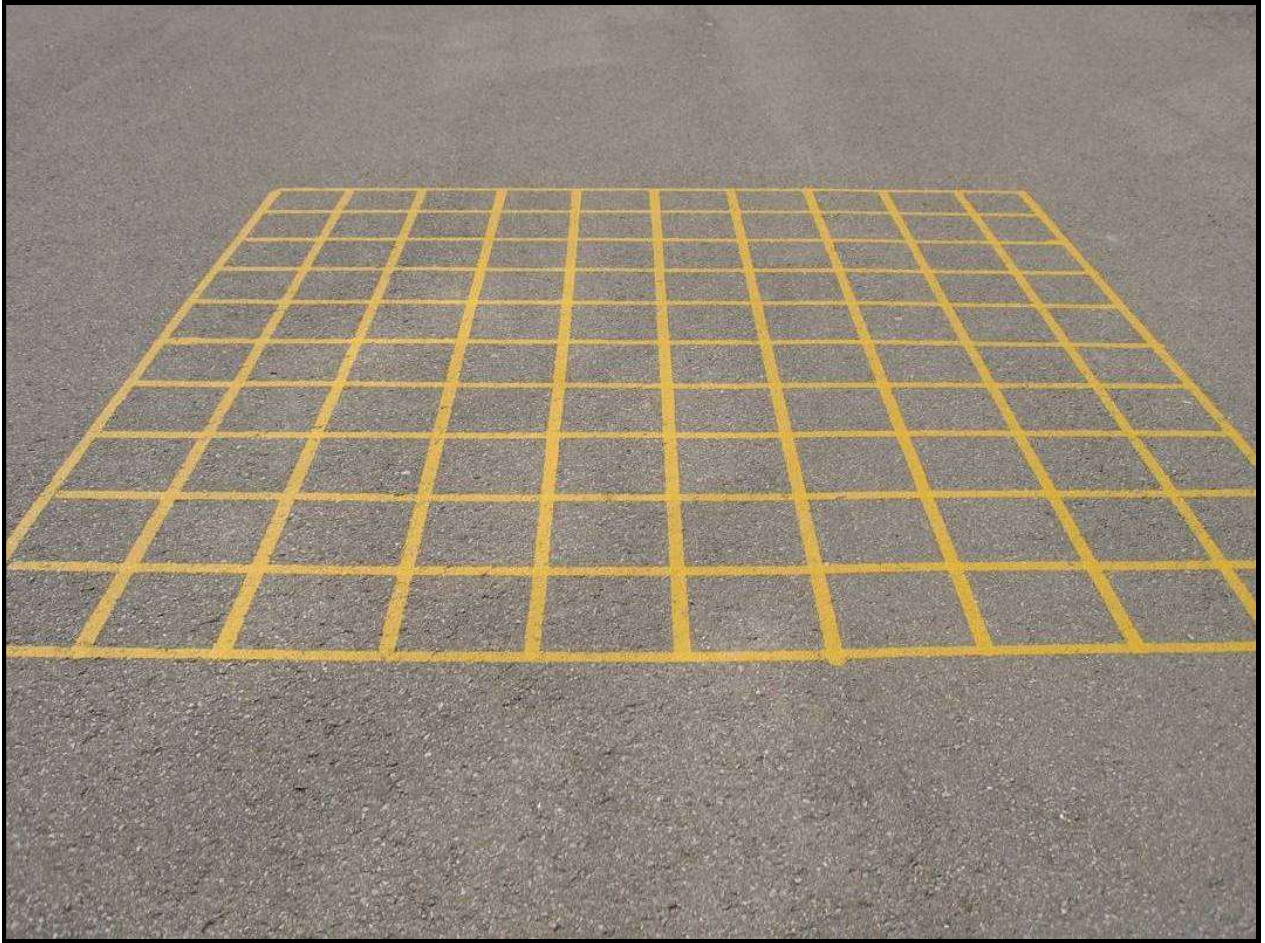




# Math in the Environment



# Math in the Environment





# Math in the Environment





## Mathematical Recipes

### Train Recipe

5 more blue cubes than yellow cubes

6 green cubes

4 more white cubes than green cubes

2 yellow cubes



### Train Recipe

There are twice as many green cubes as blue cubes.

4 blue cubes

2 fewer pink cubes than black cubes

1 fewer black cube than blue cubes

## Mathematical Recipes

### Fraction Train Recipe

$\frac{1}{2}$  of the train is yellow cubes

$\frac{1}{3}$  of the train is green cubes

The train is made up of 12 cubes

$\frac{1}{6}$  of the train is black cubes

Make the train.



### Fraction Train Recipe

$\frac{1}{2}$  of the cubes are red

2 grey cubes

1 more black cube than grey cubes