

Activity 25 Assessment

Fluency with Multiplication and Division Consolidation

Fluency with Multiplication and Division Facts

Recalls multiplication and division facts to demonstrate and fluently recall facts to 100.

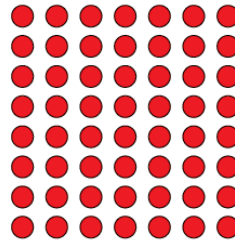
$$8 \times 7 = 56$$

"I know my facts up to 10×10 ."

Uses inverse operation to find multiplication and division facts.

$$56 \div 8 = ?$$

$$8 \times ? = 56$$



"I can use multiplication to solve division problems."

Applies estimation strategies to multiply and divide larger numbers.

Gardeners planted 236 plants in rows of 5. Estimate how many rows were planted.

$$236 \div 5 = ?$$

"I know $100 \div 5 = 20$, so $200 \div 5 = 40$. Because 236 is close to 200, I estimate about 40 rows."

Observations/Documentation

Activity 25 Assessment

Fluency with Multiplication and Division Consolidation

Fluency with Multiplication and Division Facts (cont'd)

Uses mental math strategies and properties of operations to multiply and divide larger numbers.

$$5 \times 47 = ?$$

"I can decompose the numbers to make it easier to multiply:
 $5 \times 40 = 200$, $5 \times 7 = 35$,
 and $200 + 35 = 235$."

Applies properties of operations and partial products and connects to algorithms.

$$16 \times 12 = ?$$

	10	6
10	10×10	6×10
2	10×2	6×2

$$16 \times 12 = (10 \times 10) + (10 \times 2) + (6 \times 10) + (6 \times 2)$$

$$= 100 + 20 + 60 + 12$$

$$= 192$$

Flexibly and fluently selects strategies and properties of operations to solve problems involving larger numbers.

375 students are going on a field trip. Each bus holds 25 students. How many buses are needed?

$$\begin{array}{r} 25 \overline{)375} \\ \underline{250} \quad 10 \\ 125 \\ \underline{125} \quad 5 \\ 0 \quad 15 \end{array}$$

"I subtracted multiples of 25, then added."

Observations/Documentation

Activity 25 Assessment

Fluency with Multiplication and Division Consolidation

Representing Equivalent Ratios and Rates

Uses multiplicative relationships to represent and create ratios and rates (ratio table).

It takes 6 cups of blueberries to make a pie.
How many cups of blueberries will I need to make 5 pies?

Number of cups	6	12	18	24	30
Number of pies	1	2	3	4	5

x5

"I use a ratio table to see patterns to help me solve problems."

Represents and records ratios and rates symbolically.

Number of cups	6	12	18	24	30
Number of pies	1	2	3	4	5

x5

6:1, 12:2, 18:3, 24:4, 30:5

Represents and creates equivalent ratios and rates.

The ratio of cups of blueberries to pies is 30:5.
Identify equivalent ratios.

"I multiply or divide each term by the same number. Equivalent ratios:

$$\begin{array}{c}
 30:5 \\
 \div 5 \swarrow \searrow \div 5 \\
 6:1 \\
 \times 9 \swarrow \searrow \times 9 \\
 54:9 \\
 \times 2 \swarrow \searrow \times 2 \\
 108:18
 \end{array}$$

Flexibly represents and creates equivalent ratios and rates.

A baker sells 2 pies for \$15. How much did the baker make if 7 pies were sold?

Number sold	2	4	6	8
Earnings (\$)	15	30	45	60

7
\$52.50

"7 is halfway between 6 and 8, so I find the number halfway between 45 and 60, which is \$52.50."

Observations/Documentation