Name _____

Problem of the Day

Lesson 1

John has 126 toy train cars. For his birthday, he received 37 more toy train cars. How many toy train cars does John have now?

Answer: 163

Lesson 2

Marty has 145 pages in her book to read. If she has already read 96 pages, how many pages does Marty have left to read before she finishes her book?

Answer: 49

Lesson 3

Model the problem below by drawing equal groups.

$5 \times 6 =$ 30

Sample answer:

Lesson 4

Model the problem below by using the number line.

$9 \times 2 =$ 18

Lesson 5

Model the problem below by drawing an array AND area model.

$3 \times 7 =$ 21

Name _____

Problem of the Day

Lesson 6

Apply the Commutative Property of Multiplication to this equation and solve.

$5 \times 7 = ?$

Commutative Property: 5 × 7 = 7 × 5

Answer: 35

Lesson 7

Andrew has 12 boxes of cookies. If each box of cookies contains 6 cookies, how many cookies does Andrew have in all? Model by drawing equal groups and solve.

Answer: 72 cookies

Lesson 8

Diana has 4 barrels of apples. If each barrel has 10 apples, what is the total number of apples that Diana has? Draw a number line to model and solve.

Answer: 40 apples

Lesson 9

Mark has 32 pies. If he wants to split the pies into 4 equal groups, how many pies would be in each group? Solve this problem by drawing equal groups and record your answer.

Answer: 8 pies

Lesson 10

Brady wants to split his car collection into 5 groups. If he has 40 cars in all, how many cars would be in each group? Model the problem by creating a number line to find the answer.

Answer: 8 cars

Name _____

Problem of the Day

Lesson 11

Kenzie has 15 animal figures. She wants to split the animals into equal groups of 3. How many groups can Kenzie make? Model repeated subtraction to solve the problem.

Answer: 5 groups

Lesson 12

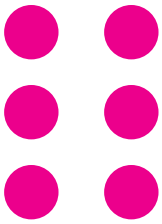
Examine the equation below. Draw a fact family house and fill it in.

$3 \times 8 = 24$

$8 \times 3 = 24$
$24 \div 3 = 8$
$24 \div 8 = 3$

Lesson 13

Gina has 6 oranges to split with a friend. How many oranges will each girl receive? Draw an array or area model to solve for an answer.



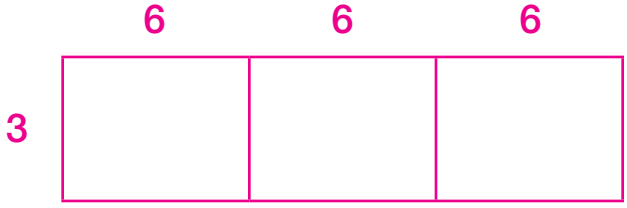
Answer: 3 oranges

Lesson 14

Solve 9×3 using equal groups.

Lesson 15

Solve $18 \div 3$ using an area model.



Name _____

Problem of the Day

Lesson 16

Quinn has 4 pails of bananas. If each pail contains 6 bananas, how many bananas does Quinn have in all? Draw a strip diagram and solve.

24 bananas

6	6	6	6

Lesson 17

Examine the equation below. Draw a fact family house and fill it in.

16 ÷ 2 = 8

16 ÷ 8 = 2
2 × 8 = 16
8 × 2 = 16

Lesson 18

Tony has 18 barrels of hay. If he wants to split the barrels into 2 equal groups, how many barrels of hay will be in each group? Draw a strip diagram and solve.

9 barrels

9	9

Lesson 19

Megan has 12 pairs of shoes. If each pair has 2 shoes, how many total shoes does Megan have in all?

What do you have?
# of groups:
in each group:
Total:
Type of strip diagram:

Draw the strip diagram and solve:

24 shoes

2	2	2	2	2	2	2	2	2	2	2	2

Lesson 20

Steve has 25 basketballs. If Steve can fit 5 basketballs in each bucket, how many buckets will Steve need to put all the basketballs up?

What do you have?
# of groups:
in each group:
Total:
Type of strip diagram:

Draw the strip diagram and solve:

5 buckets

5	5	5	5	5

Name _____

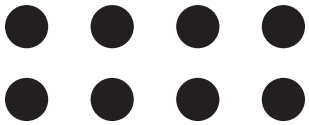
Pre-Assessment

Read each problem below and solve.

1. Aubrey has 6 nickels. How much money does she have in cents? Solve the problem and write the answer below.

Answer: 30 cents

2. Which multiplication sentence matches the array below?



A. $4 \times 2 = 8$
B. $2 \times 4 = 8$
C. $2 + 2 + 2 + 2 = 8$
D. $4 + 4 = 8$

Answers may vary.

3. Mark is using repeated subtraction to solve the problem $70 \div 10$. How many times will 10 need to be subtracted?

A. 7
B. 10
C. 8
D. 9

4. According to the Commutative Property of Multiplication, how can you write the equation $3 \times 6 = 18$ another way?

A. $6 + 6 + 6 = 18$
B. $3 + 3 + 3 + 3 + 3 + 3 = 18$
C. $6 \times 3 = 18$
D. $3 + 3 + 3 = 18$

5. Hank is baking 5 rows of 4 cookies. He wants to split the cookies equally among two friends. How many cookies will each person receive? Solve the problem and write the answer below.

Answer: 10 cookies

Name _____

Multiplication Vocabulary

DEFINITION

Multiplication is the **operation** that gives the **product** when you join **factor** groups.

$3 \times 5 = \_\_\_\_\_$

FACTORS

Factors are the numbers that are **multiplied together** to find a product.

PRODUCT

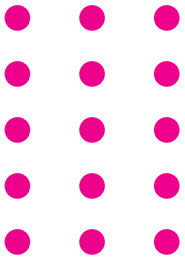
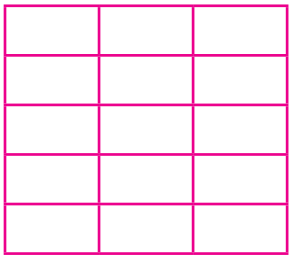
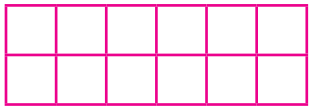
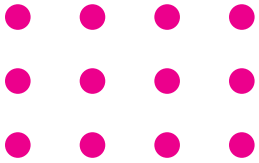
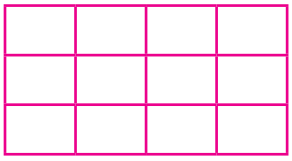
A product is the **answer** to a **multiplication** problem.

Name _____

Commutative Property of Multiplication

DEFINITION

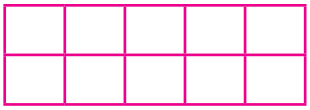
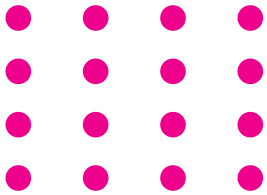
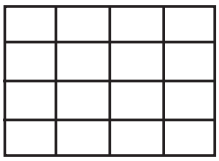
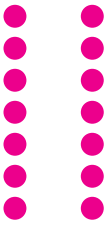
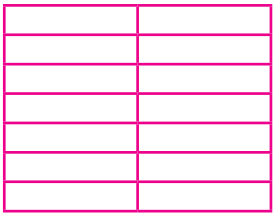
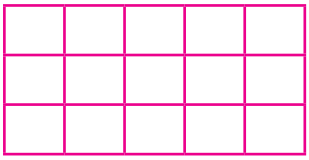
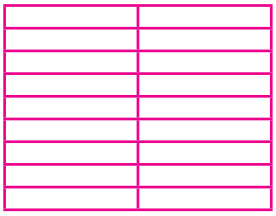
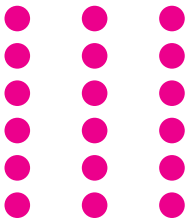
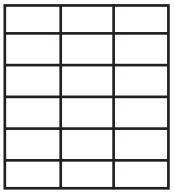
The Commutative Property of Multiplication states that ___numbers___ can be multiplied in ___any___ order and their product is the ___same___ .

MODEL	DRAW ARRAY	AREA MODEL	COMMUTATIVE PROPERTY
5 × 3 = 15 5 rows of 3			3 × 5 = 15
2 × 6 = 12 2 rows of 6			6 × 2 = 12
1 × 8 = 8 1 rows of 8			8 × 1 = 8
3 × 4 = 12 3 rows of 4			4 × 3 = 12

Name _____

Commutative Property of Multiplication

Examine the table below. Fill in each box in each row.

MODEL	DRAW ARRAY	AREA MODEL	COMMUTATIVE PROPERTY
$2 \times 5 = \underline{10}$ $\underline{2}$ rows of $\underline{5}$			$5 \times 2 = 10$
$\underline{4} \times \underline{4} = \underline{16}$ $\underline{4}$ rows of $\underline{4}$			$4 \times 4 = 16$
$\underline{7} \times \underline{2} = \underline{14}$ $\underline{7}$ rows of $\underline{2}$			$2 \times 7 = 14$
$\underline{3} \times \underline{5} = \underline{15}$ $\underline{3}$ rows of $\underline{5}$			$5 \times 3 = 15$
$9 \times 2 = \underline{18}$ $\underline{9}$ rows of $\underline{2}$			$2 \times 9 = 18$
$\underline{6} \times \underline{3} = \underline{18}$ $\underline{6}$ rows of $\underline{3}$			$3 \times 6 = 18$

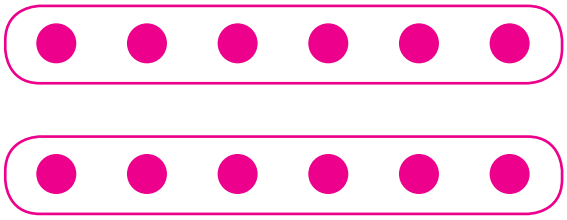
Name _____

Representing Multiplication Quiz

Examine the multiplication equation and determine how to represent the equation with groups, repeated addition, arrays, Commutative Property, and on a number line. Make sure to fill in the product for the equation.

$2 \times 6 = \underline{12}$

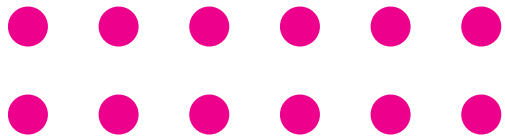
GROUPS



REPEATED ADDITION

6 + 6 = 12

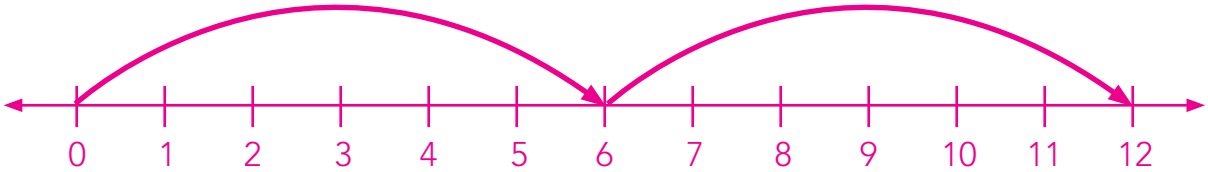
ARRAY



COMMUTATIVE PROPERTY

6 × 2 = 12

NUMBER LINE



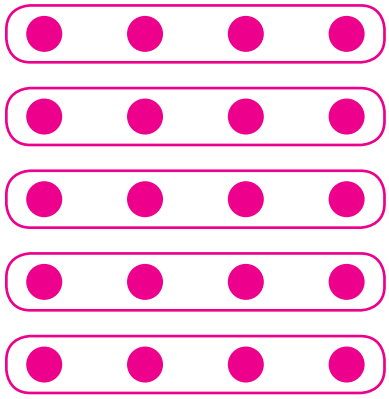
Name _____

Representing Multiplication Quiz

Examine the multiplication equation and determine how to represent the equation with groups, repeated addition, arrays, Commutative Property, and on a number line. Make sure to fill in the product for the equation.

$5 \times 4 =$ 20

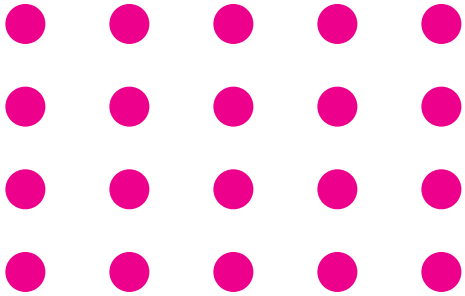
GROUPS



REPEATED ADDITION

4 + 4 + 4 + 4 + 4 = 20

ARRAY



COMMUTATIVE PROPERTY

4 × 5 = 20

NUMBER LINE

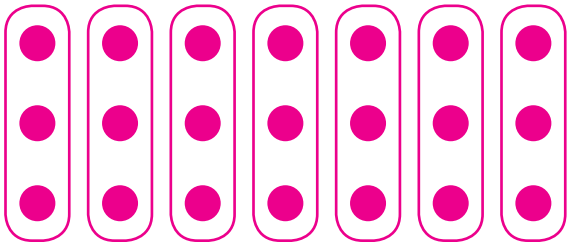
Name _____

Representing Multiplication Quiz

Examine the multiplication equation and determine how to represent the equation with groups, repeated addition, arrays, Commutative Property, and on a number line. Make sure to fill in the product for the equation.

$7 \times 3 = \underline{21}$

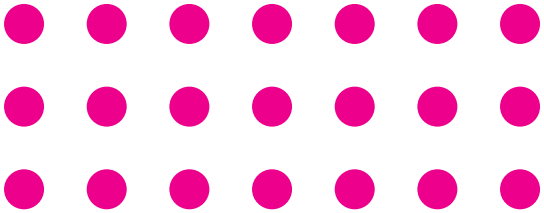
GROUPS



REPEATED ADDITION

3 + 3 + 3 + 3 + 3 + 3 + 3 = 21

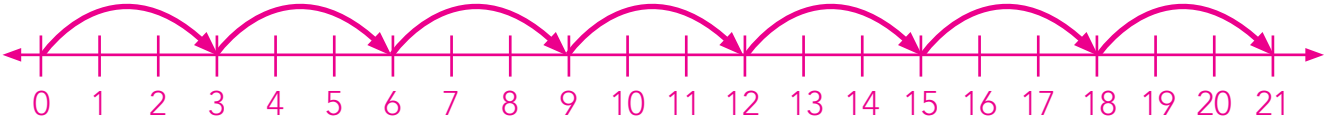
ARRAY



COMMUTATIVE PROPERTY

3 × 7 = 21

NUMBER LINE



Name _____

Representing Multiplication Quiz

Examine the multiplication equation and determine how to represent the equation with groups, repeated addition, arrays, Commutative Property, and on a number line. Make sure to fill in the product for the equation.

$8 \times 1 = \underline{8}$

GROUPS

REPEATED ADDITION

1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 = 8

ARRAY

COMMUTATIVE PROPERTY

1 × 8 = 8

NUMBER LINE

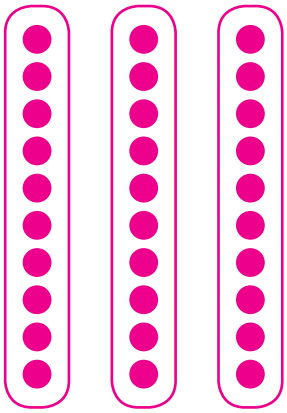
Name _____

Representing Multiplication Quiz

Examine the multiplication equation and determine how to represent the equation with groups, repeated addition, arrays, Commutative Property, and on a number line. Make sure to fill in the product for the equation.

$3 \times 10 =$ **30**

GROUPS



REPEATED ADDITION

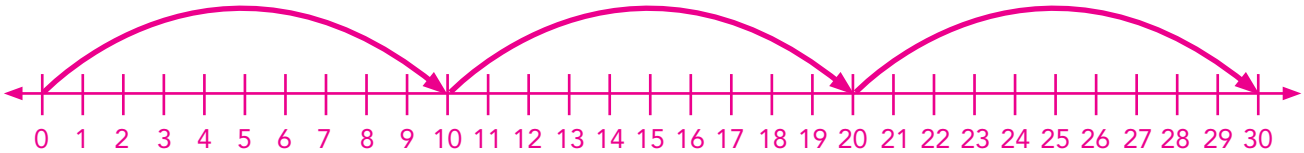
10 + 10 + 10 = 30

ARRAY

COMMUTATIVE PROPERTY

10 × 3 = 30

NUMBER LINE



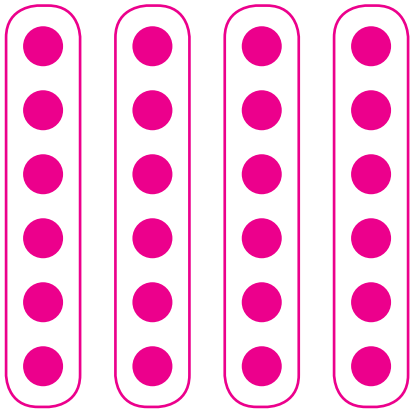
Name _____

Representing Multiplication Quiz

Examine the multiplication equation and determine how to represent the equation with groups, repeated addition, arrays, Commutative Property, and on a number line. Make sure to fill in the product for the equation.

$4 \times 6 = \underline{24}$

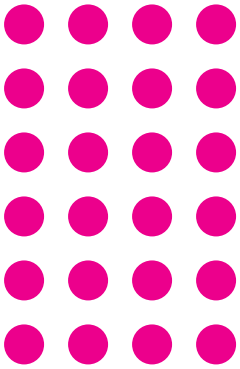
GROUPS



REPEATED ADDITION

6 + 6 + 6 + 6 = 24

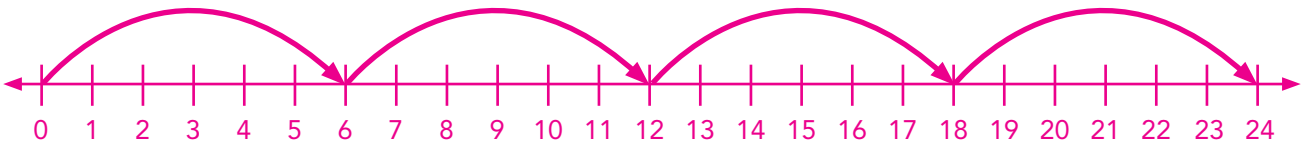
ARRAY



COMMUTATIVE PROPERTY

6 × 4 = 24

NUMBER LINE



Name _____

Division Vocabulary

DEFINITION

Division is the **operation** that is used to find how many **equal** **groups** or how many are in **each** group.

$$20 \div 5 = \_\_\_\_\_$$

DIVIDEND

The total number that is **split** into **equal** groups.

DIVISOR

The number of equal **groups** or the **number** in each group.

QUOTIENT

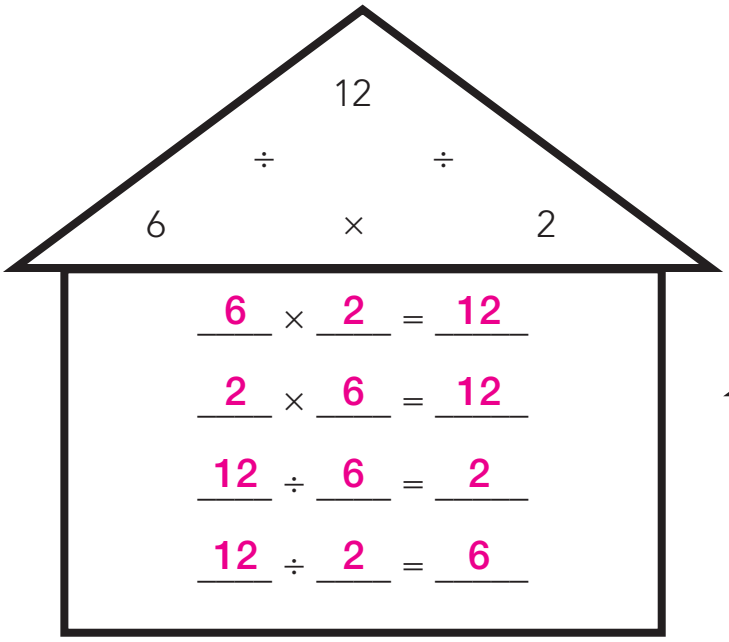
The **answer** to a **division** problem.

Name _____

Fact Families

A group of **related** facts using the **same** numbers.

Order of answers will vary.

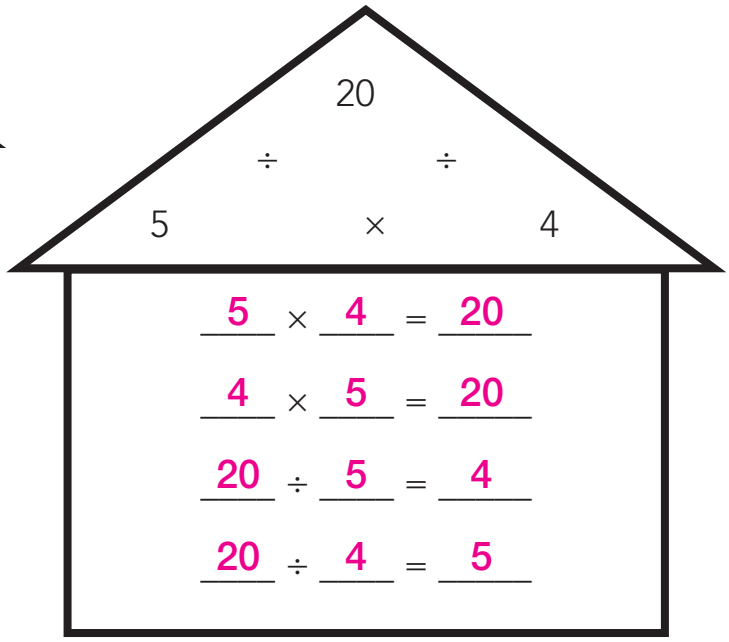


6 × 2 = 12

2 × 6 = 12

12 ÷ 6 = 2

12 ÷ 2 = 6

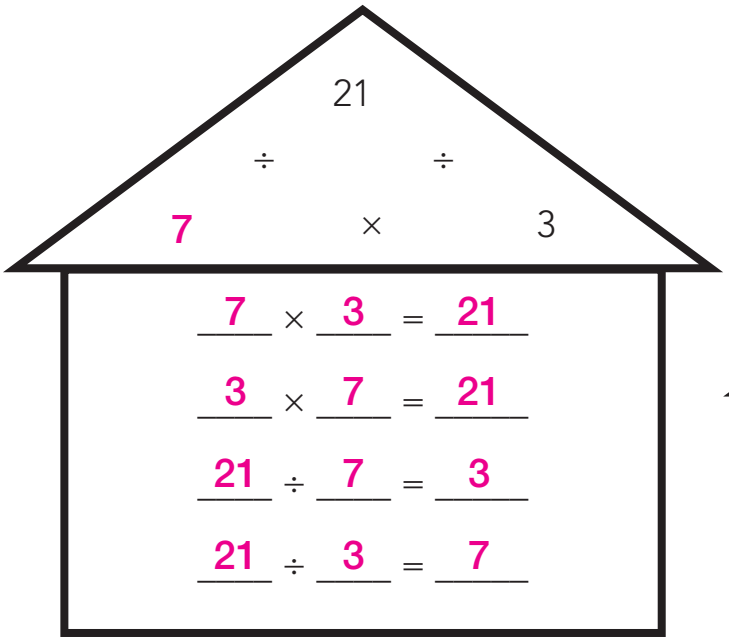


5 × 4 = 20

4 × 5 = 20

20 ÷ 5 = 4

20 ÷ 4 = 5

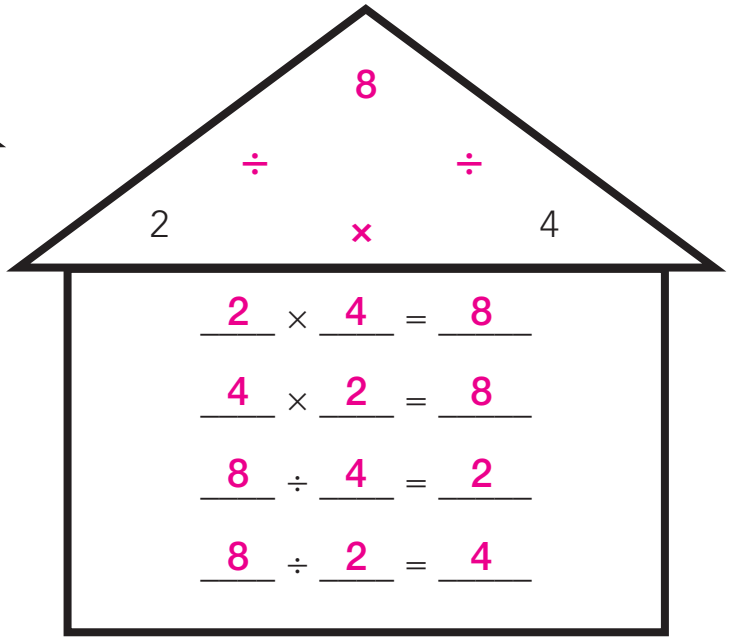


7 × 3 = 21

3 × 7 = 21

21 ÷ 7 = 3

21 ÷ 3 = 7



2 × 4 = 8

4 × 2 = 8

8 ÷ 4 = 2

8 ÷ 2 = 4

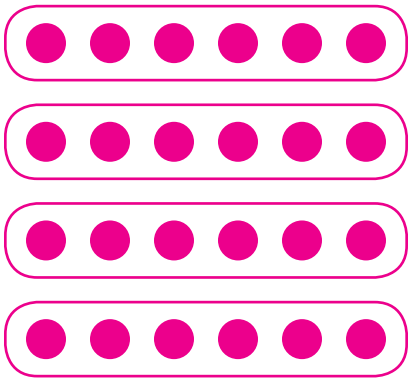
Name _____

Representing Division Quiz

Examine the division equation and determine how to represent the equation with groups, repeated subtraction, arrays, fact families, and on a number line. Make sure to fill in the quotient for the equation.

$24 \div 4 = \underline{6}$

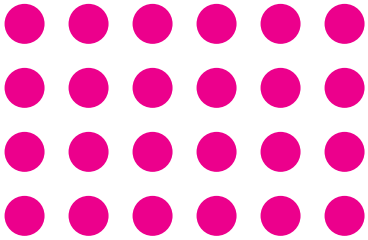
GROUPS



REPEATED SUBTRACTION

24 – 4 = 20
20 – 4 = 16
16 – 4 = 12
12 – 4 = 8
8 – 4 = 4
4 – 4 = 0

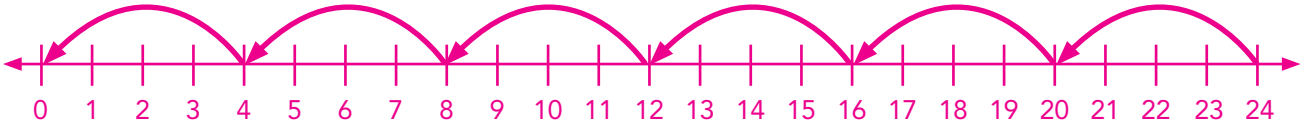
ARRAY



FACT FAMILY

24 ÷ 6 = 4
4 × 6 = 24
6 × 4 = 24

NUMBER LINE



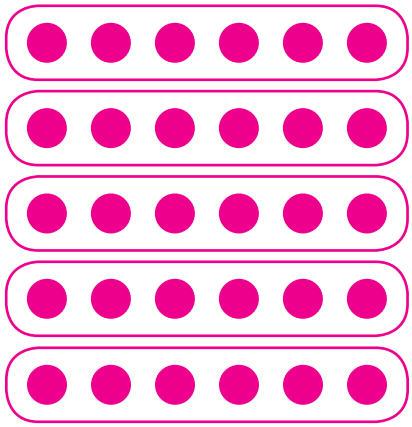
Name _____

Representing Division Quiz

Examine the division equation and determine how to represent the equation with groups, repeated subtraction, arrays, fact families, and on a number line. Make sure to fill in the quotient for the equation.

$30 \div 5 = \underline{6}$

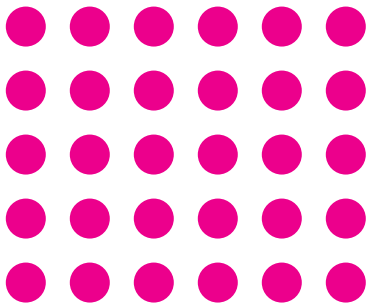
GROUPS



REPEATED SUBTRACTION

30 – 5 = 25
25 – 5 = 20
20 – 5 = 15
15 – 5 = 10
10 – 5 = 5
5 – 0 = 0

ARRAY



FACT FAMILY

30 ÷ 6 = 5
5 × 6 = 30
6 × 5 = 30

NUMBER LINE

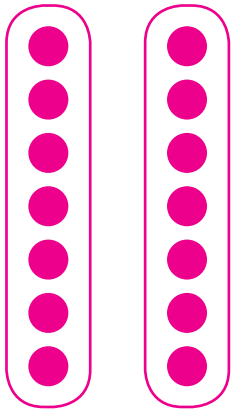
Name _____

Representing Division Quiz

Examine the division equation and determine how to represent the equation with groups, repeated subtraction, arrays, fact families, and on a number line. Make sure to fill in the quotient for the equation.

$14 \div 7 = \underline{2}$

GROUPS



REPEATED SUBTRACTION

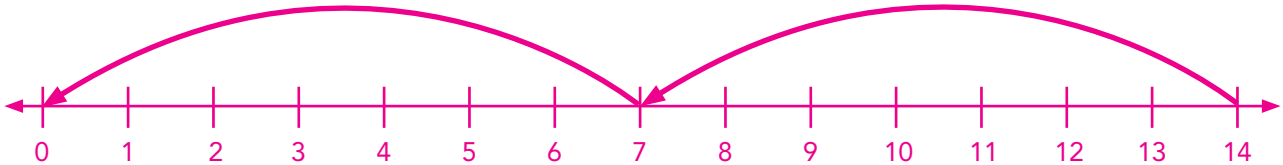
14 – 7 = 7
7 – 7 = 0

ARRAY

FACT FAMILY

14 ÷ 2 = 7
7 × 2 = 14
2 × 7 = 14

NUMBER LINE



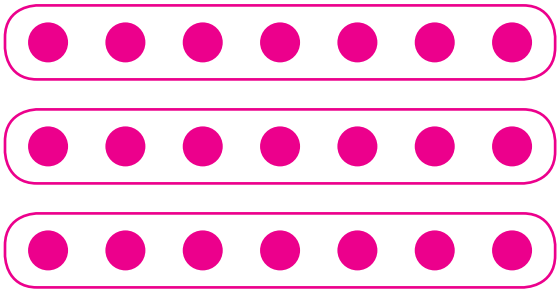
Name _____

Representing Division Quiz

Examine the division equation and determine how to represent the equation with groups, repeated subtraction, arrays, fact families, and on a number line. Make sure to fill in the quotient for the equation.

$21 \div 3 = \underline{7}$

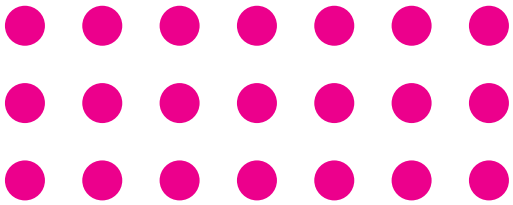
GROUPS



REPEATED SUBTRACTION

21 – 3 = 18
18 – 3 = 15
15 – 3 = 12
12 – 3 = 9
9 – 3 = 6
6 – 3 = 3
3 – 3 = 0

ARRAY



FACT FAMILY

21 ÷ 7 = 3
7 × 3 = 21
3 × 7 = 21

NUMBER LINE

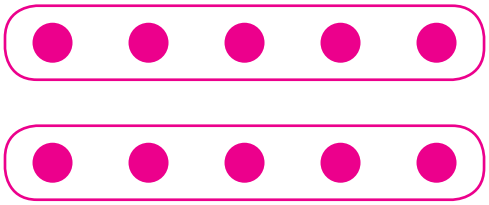
Name _____

Representing Division Quiz

Examine the division equation and determine how to represent the equation with groups, repeated subtraction, arrays, fact families, and on a number line. Make sure to fill in the quotient for the equation.

$10 \div 2 = \underline{5}$

GROUPS



REPEATED SUBTRACTION

10 – 2 = 8
8 – 2 = 6
6 – 2 = 4
4 – 2 = 2
2 – 2 = 0

ARRAY

FACT FAMILY

10 ÷ 5 = 2
2 × 5 = 10
5 × 2 = 10

NUMBER LINE

Name _____

Representing Division Quiz

Examine the division equation and determine how to represent the equation with groups, repeated subtraction, arrays, fact families, and on a number line. Make sure to fill in the quotient for the equation.

$9 \div 1 = \underline{9}$

GROUPS

REPEATED SUBTRACTION

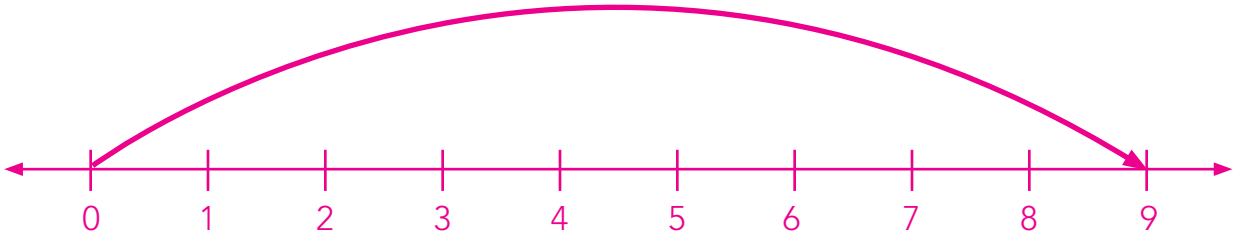
$9 - 1 = 8$
$8 - 1 = 7$
$7 - 1 = 6$
$6 - 1 = 5$
$5 - 1 = 4$
$4 - 1 = 3$
$3 - 1 = 2$
$2 - 1 = 1$
$1 - 1 = 0$

ARRAY

FACT FAMILY

$9 \div 9 = 1$
$1 \times 9 = 9$
$9 \times 1 = 9$

NUMBER LINE

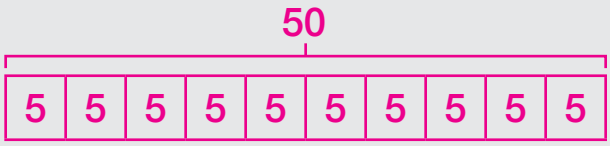


Name _____

Multiplication & Division Strip Diagrams Quiz

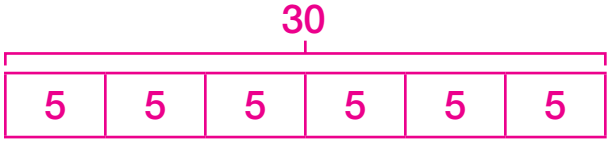
Read each problem below. Create a strip diagram and then write an equation to solve.

Heather has 10 photo pages to fill. If each photo page can hold 5 pictures, how many pictures can Heather use to fill her photo pages? Draw a strip diagram and write an equation to solve.



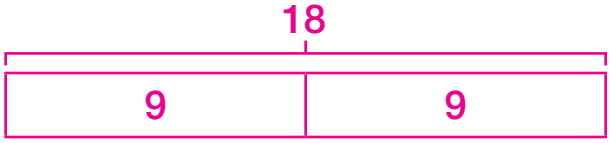
Equation: 5 × 10 = 50

Tommy made 30 cookies. If he wants to split the cookies and put 5 on each tray, how many trays does Tommy need? Draw a strip diagram and write an equation to solve.



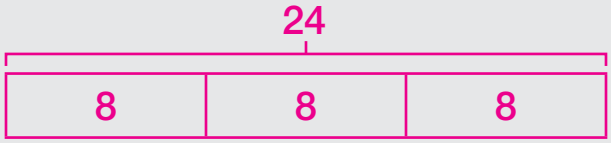
Equation: 30 ÷ 5 = 6

Emily has 18 beads. If Emily wants to make bracelets that each contain 9 beads, how many bracelets can Emily make? Draw a strip diagram and write an equation to solve.



Equation: 18 ÷ 9 = 2

Kyle has 3 barrels of apples. If each barrel contains 8 apples, what is the total number of apples that Kyle has? Draw a strip diagram and write an equation to solve.



Equation: 3 × 8 = 24

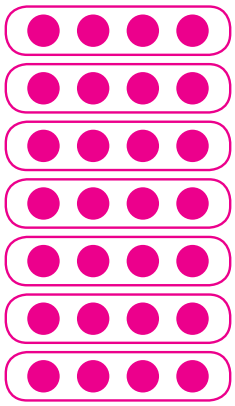
Name _____

Assessment

Examine the multiplication equation and determine how to represent the equation with groups, repeated addition, arrays, Commutative Property, and on a number line. Make sure to fill in the product for the equation.

$7 \times 4 = \underline{28}$

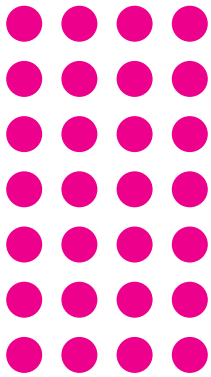
GROUPS



REPEATED ADDITION

7 + 7 + 7 + 7 = 28

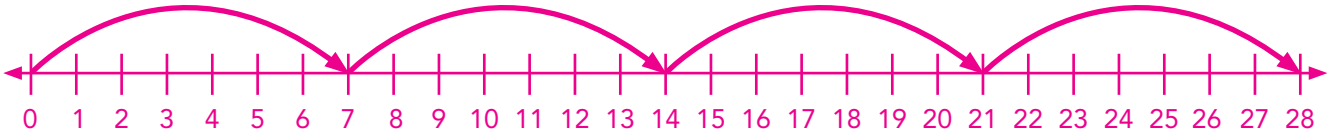
ARRAY



COMMUTATIVE PROPERTY

4 × 7 = 28

NUMBER LINE

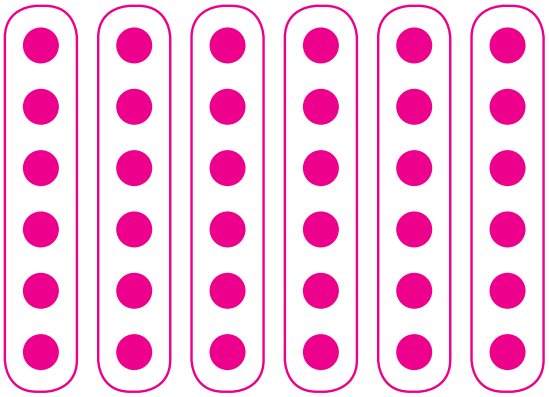


Name _____

Examine the division equation and determine how to represent the equation with groups, repeated subtraction, arrays, fact families, and on a number line. Make sure to fill in the quotient for the equation.

$36 \div 6 = \underline{28}$

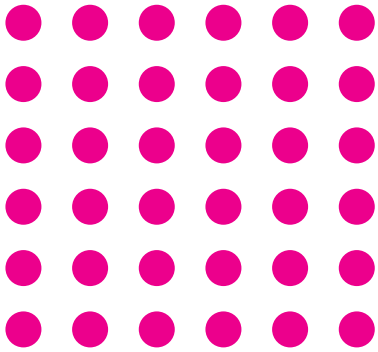
GROUPS



REPEATED SUBTRACTION

36 – 6 = 30
30 – 6 = 24
24 – 6 - 18
18 – 6 = 12
12 – 6 = 6
6 – 6 = 0

ARRAY



FACT FAMILY

36 ÷ 6 = 6
6 × 6 = 36
6 × 6 = 36

NUMBER LINE

Name _____

Read each problem below and solve.

11. Mark has 24 baseballs to sort into bins. If Mark has 6 bins, how many baseballs should he put in each bin? Draw equal groups to model and solve. Write the equation and answer below.

Equation and answer: 24 ÷ 6 = 4

12. Kendra has 5 boxes of markers. If each box contains 10 markers, how many markers does Kendra have in all? Solve by modeling repeated addition. Write the equation and answer below.

Equation and answer: 5 × 10 = 50

13. Wendi had 2 pots of flowers. If each pot contained 9 flowers, how many flowers did Wendi have in all? Model how to solve this problem using repeated addition. Write the equation and answer below.

Equation and answer: : 2 × 9 = 18

14. Cali has 15 ribbons. If she wants to split the ribbons into equal piles of 3, how many ribbons will Cali have in each pile? Draw equal groups to model and solve. Write the equation and answer below.

Equation and answer: 15 ÷ 3 = 5

15. Noelle's family has 4 barns of chickens. If each barn contains 8 chickens, how many chickens does Noelle's family have? Draw an array or area model to solve the problem. Write the equation and answer below.

Equation and answer: 4 × 8 = 32

16. Donny used 2 cups of flour to make a loaf of his homemade bread. If he makes 8 more loaves, how many cups of flour would Donny need? Model this problem on a number line. Write the equation and answer below.

Equation and answer: 9 × 2 = 18

17. Tania has 2 barrels of apples. If each barrel contains 11 apples, what is the total amount of apples that Tania has? Draw a strip diagram to model and solve. Write the equation and answer below.

Equation and answer: 2 × 11 = 22

18. Cassidy has 30 rubber bands. She wants to split the rubber bands into 6 equal groups. How many rubber bands will be in each group? Draw a strip diagram to model and solve. Write the equation and answer below.

Equation and answer: 30 ÷ 6 = 5

19. Richard made 25 cupcakes. If he wants to make up trays of 5 cupcakes, how many cupcakes will be on each tray? Draw a strip diagram to model and solve. Write the equation and answer below.

Equation and answer: 25 ÷ 5 = 5

20. George picked up 3 packs of crackers. If each pack contains 11 crackers, how many crackers did George pick up in all? Draw a strip diagram and solve. Write the equation and answer below.

Equation and answer: 3 × 11 = 33