

# A Story of Units<sup>®</sup>

## Eureka Math<sup>™</sup>

### Grade 3 Module 1

### Student File\_A

### Student Workbook

This file contains:

- G3-M1 Problem Sets
- G3-M1 Homework
- G3-M1 Templates<sup>1</sup>

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<sup>1</sup>Note that not all lessons in this module include templates.

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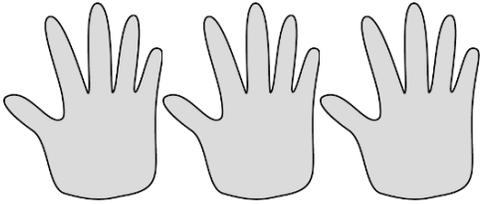
10 9 8 7 6 5 4 3 2

G3-M1-SFA-1.3.1-05.2015

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Fill in the blanks to make true statements.

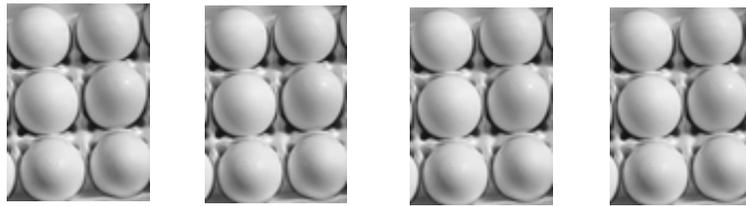


a. 3 groups of five = \_\_\_\_\_

3 fives = \_\_\_\_\_

 $3 \times 5 =$  \_\_\_\_\_b.  $3 + 3 + 3 + 3 + 3 =$  \_\_\_\_\_

5 groups of three = \_\_\_\_\_

 $5 \times 3 =$  \_\_\_\_\_c.  $6 + 6 + 6 + 6 =$  \_\_\_\_\_

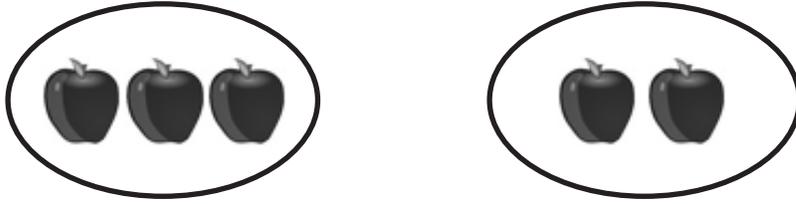
\_\_\_\_\_ groups of six = \_\_\_\_\_

 $4 \times$  \_\_\_\_\_ = \_\_\_\_\_d.  $4 +$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $=$  \_\_\_\_\_

6 groups of \_\_\_\_\_ = \_\_\_\_\_

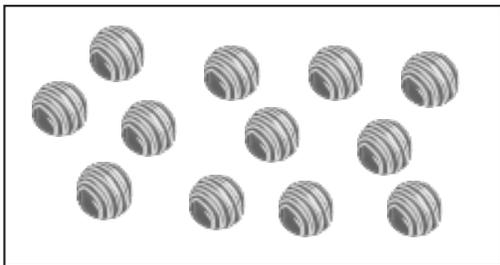
 $6 \times$  \_\_\_\_\_ = \_\_\_\_\_

2. The picture below shows 2 groups of apples. Does the picture show  $2 \times 3$ ? Explain why or why not.



3. Draw a picture to show  $2 \times 3 = 6$ .

4. Caroline, Brian, and Marta share a box of chocolates. They each get the same amount. Circle the chocolates below to show 3 groups of 4. Then, write a repeated addition sentence and a multiplication sentence to represent the picture.



Name \_\_\_\_\_

Date \_\_\_\_\_

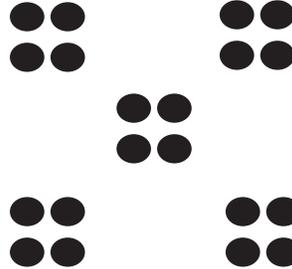
1. Fill in the blanks to make true statements.



a. 4 groups of five = \_\_\_\_\_

4 fives = \_\_\_\_\_

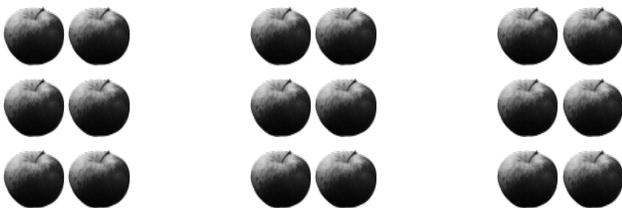
$4 \times 5 =$  \_\_\_\_\_



b. 5 groups of four = \_\_\_\_\_

5 fours = \_\_\_\_\_

$5 \times 4 =$  \_\_\_\_\_



c.  $6 + 6 + 6 =$  \_\_\_\_\_

\_\_\_\_\_ groups of six = \_\_\_\_\_

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



d.  $3 +$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $+$  \_\_\_\_\_  $=$  \_\_\_\_\_

6 groups of \_\_\_\_\_ = \_\_\_\_\_

$6 \times$  \_\_\_\_\_ = \_\_\_\_\_

2. The picture below shows 3 groups of hot dogs. Does the picture show  $3 \times 3$ ? Explain why or why not.



3. Draw a picture to show  $4 \times 2 = 8$ .

4. Circle the pencils below to show 3 groups of 6. Write a repeated addition and a multiplication sentence to represent the picture.

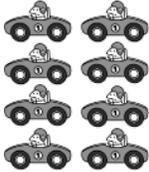


Name \_\_\_\_\_

Date \_\_\_\_\_

Use the arrays below to answer each set of questions.

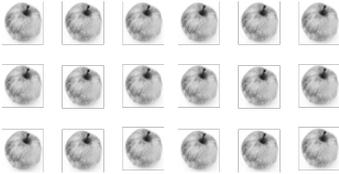
1.



a. How many rows of cars are there? \_\_\_\_\_

b. How many cars are there in each row? \_\_\_\_\_

2.



a. What is the number of rows? \_\_\_\_\_

b. What is the number of objects in each row? \_\_\_\_\_

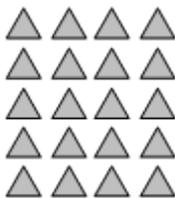
3.



a. There are 4 spoons in each row. How many spoons are in 2 rows? \_\_\_\_\_

b. Write a multiplication expression to describe the array. \_\_\_\_\_

4.



a. There are 5 rows of triangles. How many triangles are in each row? \_\_\_\_\_

b. Write a multiplication expression to describe the total number of triangles.  
\_\_\_\_\_

5. The dots below show 2 groups of 5.



- a. Redraw the dots as an array that shows 2 rows of 5.



- b. Compare the drawing to your array. Write at least 1 reason why they are the same and 1 reason why they are different.

6. Emma collects rocks. She arranges them in 4 rows of 3. Draw Emma's array to show how many rocks she has altogether. Then, write a multiplication equation to describe the array.
7. Joshua organizes cans of food into an array. He thinks, "My cans show  $5 \times 3$ !" Draw Joshua's array to find the total number of cans he organizes.

Name \_\_\_\_\_

Date \_\_\_\_\_

Use the arrays below to answer each set of questions.

1.



a. How many rows of erasers are there? \_\_\_\_\_

b. How many erasers are there in each row? \_\_\_\_\_

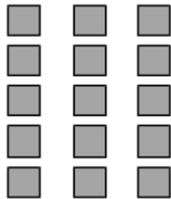
2.



a. What is the number of rows? \_\_\_\_\_

b. What is the number of objects in each row? \_\_\_\_\_

3.



a. There are 3 squares in each row. How many squares are in 5 rows? \_\_\_\_\_

b. Write a multiplication expression to describe the array. \_\_\_\_\_

4.



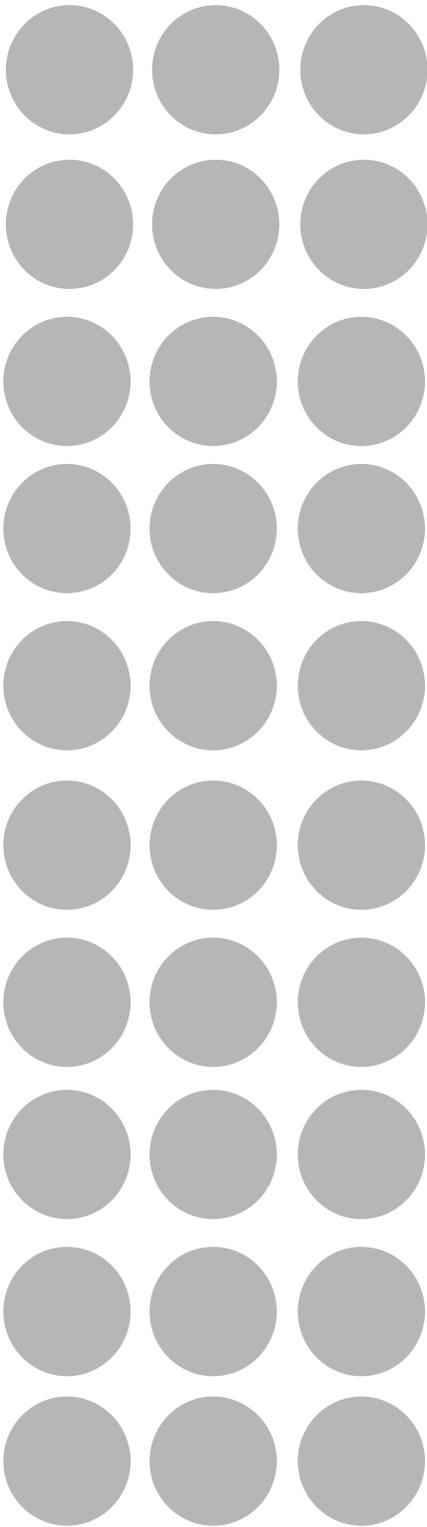
a. There are 6 rows of stars. How many stars are in each row? \_\_\_\_\_

b. Write a multiplication expression to describe the array. \_\_\_\_\_

5. The triangles below show 3 groups of four.



- a. Redraw the triangles as an array that shows 3 rows of four.
- b. Compare the drawing to your array. How are they the same? How are they different?
6. Roger has a collection of stamps. He arranges the stamps into 5 rows of four. Draw an array to represent Roger's stamps. Then, write a multiplication equation to describe the array.
7. Kimberly arranges her 18 markers as an array. Draw an array that Kimberly might make. Then, write a multiplication equation to describe your array.



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threes array

Name \_\_\_\_\_

Date \_\_\_\_\_

Solve Problems 1–4 using the pictures provided for each problem.

1. There are 5 flowers in each bunch. How many flowers are in 4 bunches?

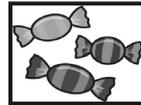
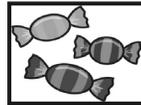
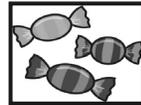
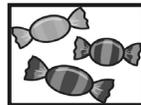
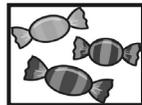
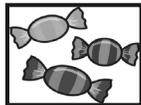


a. Number of groups: \_\_\_\_\_ Size of each group: \_\_\_\_\_

b.  $4 \times 5 =$  \_\_\_\_\_

c. There are \_\_\_\_\_ flowers altogether.

2. There are \_\_\_\_\_ candies in each box. How many candies are in 6 boxes?

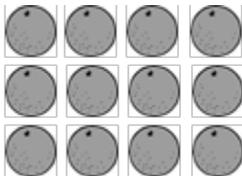


a. Number of groups: \_\_\_\_\_ Size of each group: \_\_\_\_\_

b.  $6 \times$  \_\_\_\_\_  $=$  \_\_\_\_\_

c. There are \_\_\_\_\_ candies altogether.

3. There are 4 oranges in each row. How many oranges are there in \_\_\_\_\_ rows?

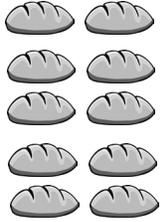


a. Number of rows: \_\_\_\_\_ Size of each row: \_\_\_\_\_

b. \_\_\_\_\_  $\times 4 =$  \_\_\_\_\_

c. There are \_\_\_\_\_ oranges altogether.

4. There are \_\_\_\_\_ loaves of bread in each row. How many loaves of bread are there in 5 rows?



a. Number of rows: \_\_\_\_\_ Size of each row: \_\_\_\_\_

b. \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

c. There are \_\_\_\_\_ loaves of bread altogether.

5. a. Write a multiplication equation for the array shown below.

X X X  
X X X  
X X X  
X X X

b. Draw a number bond for the array where each part represents the amount in one row.

6. Draw an array using factors 2 and 3. Then, show a number bond where each part represents the amount in one row.

Name \_\_\_\_\_

Date \_\_\_\_\_

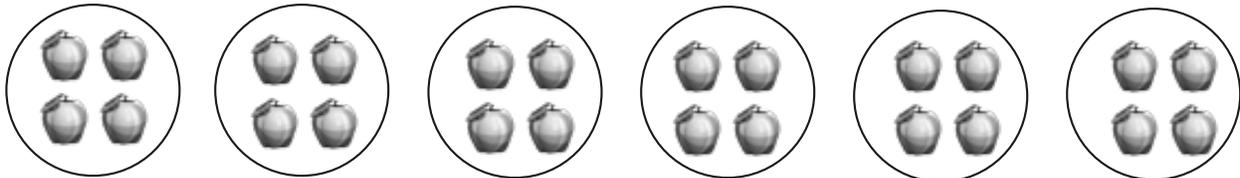
Solve Problems 1–4 using the pictures provided for each problem.

1. There are 5 pineapples in each group. How many pineapples are there in 5 groups?



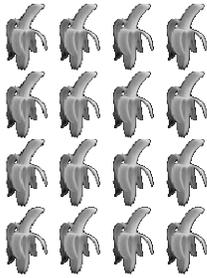
- a. Number of groups: \_\_\_\_\_ Size of each group: \_\_\_\_\_
- b.  $5 \times 5 =$  \_\_\_\_\_
- c. There are \_\_\_\_\_ pineapples altogether.

2. There are \_\_\_\_\_ apples in each basket. How many apples are there in 6 baskets?



- a. Number of groups: \_\_\_\_\_ Size of each group: \_\_\_\_\_
- b.  $6 \times$  \_\_\_\_\_  $=$  \_\_\_\_\_
- c. There are \_\_\_\_\_ apples altogether.

3. There are 4 bananas in each row. How many bananas are there in \_\_\_\_\_ rows?



a. Number of rows: \_\_\_\_\_ Size of each row: \_\_\_\_\_

b. \_\_\_\_\_  $\times$  4 = \_\_\_\_\_

c. There are \_\_\_\_\_ bananas altogether.

4. There are \_\_\_\_\_ peppers in each row. How many peppers are there in 6 rows?



a. Number of rows: \_\_\_\_\_ Size of each row: \_\_\_\_\_

b. \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

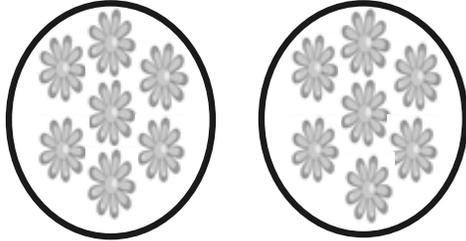
c. There are \_\_\_\_\_ peppers altogether.

5. Draw an array using factors 4 and 2. Then, show a number bond where each part represents the amount in one row.

Name \_\_\_\_\_

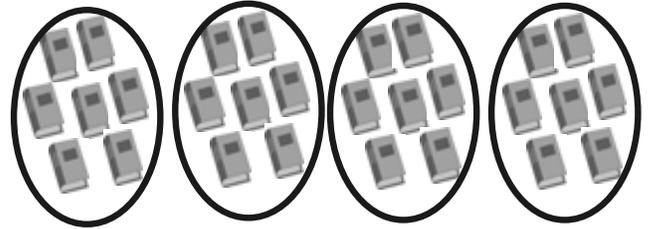
Date \_\_\_\_\_

1.



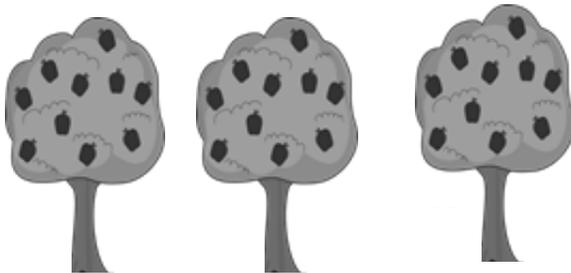
14 flowers are divided into 2 equal groups.  
There are \_\_\_\_\_ flowers in each group.

2.



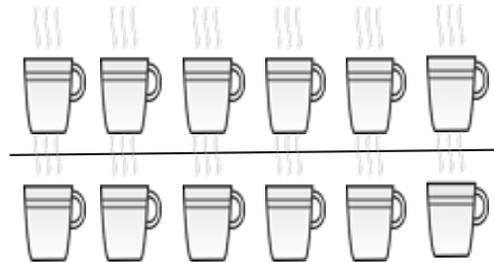
28 books are divided into 4 equal groups.  
There are \_\_\_\_\_ books in each group.

3.



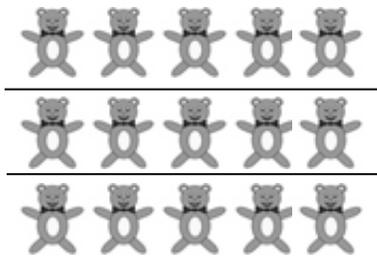
30 apples are divided into \_\_\_\_\_ equal groups.  
There are \_\_\_\_\_ apples in each group.

4.



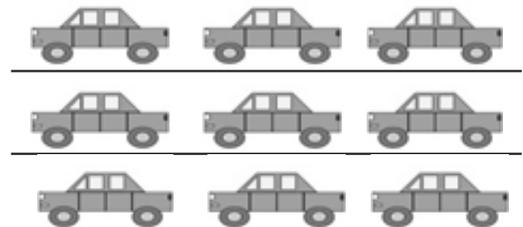
\_\_\_\_\_ cups are divided into \_\_\_\_\_ equal groups.  
There are \_\_\_\_\_ cups in each group.  
 $12 \div 2 = \underline{\hspace{2cm}}$

5.



There are \_\_\_\_\_ toys in each group.  
 $15 \div 3 = \underline{\hspace{2cm}}$

6.



$9 \div 3 = \underline{\hspace{2cm}}$

7. Audrina has 24 colored pencils. She puts them in 4 equal groups. How many colored pencils are in each group?



There are \_\_\_\_\_ colored pencils in each group.

$$24 \div 4 = \underline{\hspace{2cm}}$$

8. Charlie picks 20 apples. He divides them equally between 5 baskets. Draw the apples in each basket.



There are \_\_\_\_\_ apples in each basket.

$$20 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

9. Chelsea collects butterfly stickers. The picture shows how she placed them in her book. Write a division sentence to show how she equally grouped her stickers.



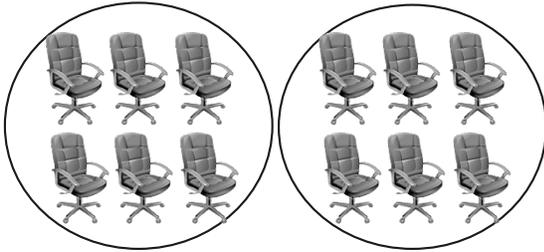
There are \_\_\_\_\_ butterflies in each row.

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Name \_\_\_\_\_

Date \_\_\_\_\_

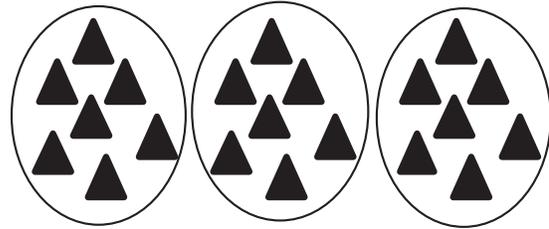
1.



12 chairs are divided into 2 equal groups.

There are \_\_\_\_\_ chairs in each group.

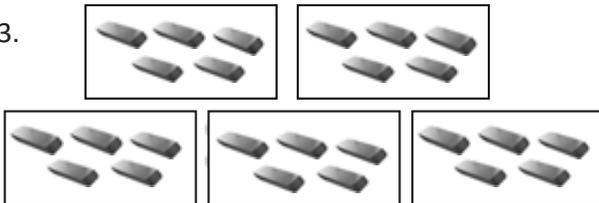
2.



21 triangles are divided into 3 equal groups.

There are \_\_\_\_\_ triangles in each group.

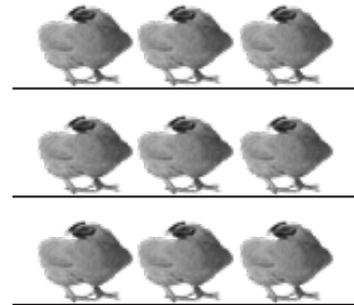
3.



25 erasers are divided into \_\_\_\_\_ equal groups.

There are \_\_\_\_\_ erasers in each group.

4.

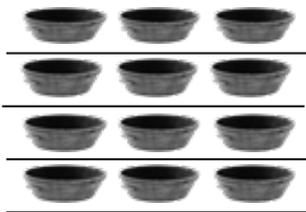


\_\_\_\_\_ chickens are divided into \_\_\_\_\_ equal groups.

There are \_\_\_\_\_ chickens in each group.

$9 \div 3 = \underline{\hspace{2cm}}$

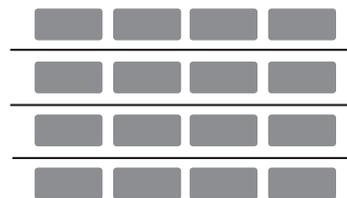
5.



There are \_\_\_\_\_ buckets in each group.

$12 \div 4 = \underline{\hspace{2cm}}$

6.



$16 \div 4 = \underline{\hspace{2cm}}$

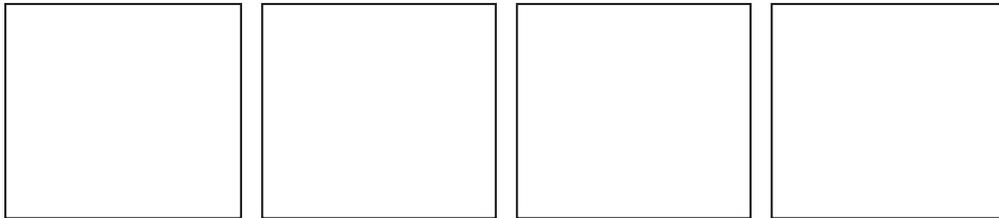
7. Andrew has 21 keys. He puts them in 3 equal groups. How many keys are in each group?



There are \_\_\_\_\_ keys in each group.

$$21 \div 3 = \underline{\hspace{2cm}}$$

8. Mr. Doyle has 20 pencils. He divides them equally between 4 tables. Draw the pencils on each table.



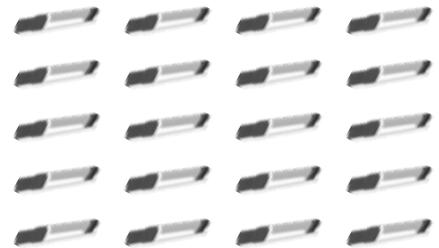
There are \_\_\_\_\_ pencils on each table.

$$20 \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

9. Jenna has markers. The picture shows how she placed them on her desk. Write a division sentence to represent how she equally grouped her markers.

There are \_\_\_\_\_ markers in each row.

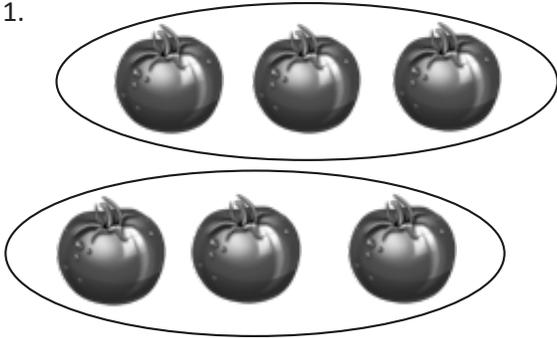
$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



Name \_\_\_\_\_

Date \_\_\_\_\_

1.



Divide 6 tomatoes into groups of 3.

There are \_\_\_\_\_ groups of 3 tomatoes.

$$6 \div 3 = 2$$

2.

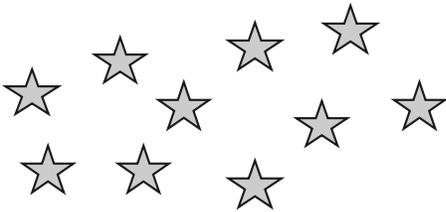


Divide 8 lollipops into groups of 2.

There are \_\_\_\_\_ groups.

$$8 \div 2 = \underline{\hspace{2cm}}$$

3.



Divide 10 stars into groups of 5.

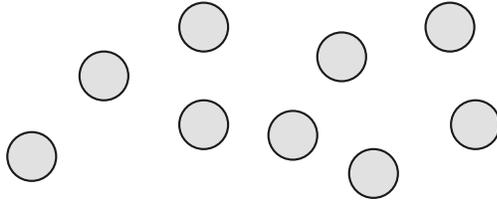
$$10 \div 5 = \underline{\hspace{2cm}}$$

4.

Divide the shells to show  $12 \div 3 = \underline{\hspace{2cm}}$ , where the unknown represents the number of groups.

How many groups are there? \_\_\_\_\_

5. Rachel has 9 crackers. She puts 3 crackers in each bag. Circle the crackers to show Rachel's bags.



- a. Write a division sentence where the answer represents the number of Rachel's bags.
- b. Draw a number bond to represent the problem.

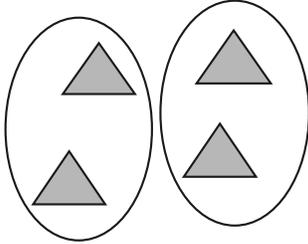
6. Jameisha has 16 wheels to make toy cars. She uses 4 wheels for each car.

- a. Use a count-by to find the number of cars Jameisha can build. Make a drawing to match your counting.
- b. Write a division sentence to represent the problem.

Name \_\_\_\_\_

Date \_\_\_\_\_

1.

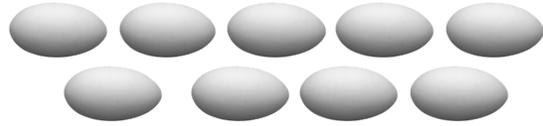


Divide 4 triangles into groups of 2.

There are \_\_\_\_\_ groups of 2 triangles.

$$4 \div 2 = 2$$

2.



Divide 9 eggs into groups of 3.

There are \_\_\_\_\_ groups.

$$9 \div 3 = \underline{\quad}$$

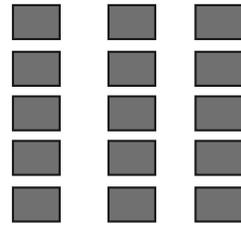
3.



Divide 12 buckets of paint into groups of 3.

$$12 \div 3 = \underline{\quad}$$

4.

Group the squares to show  $15 \div 5 = \underline{\quad}$ , where the unknown represents the number of groups.

How many groups are there? \_\_\_\_\_

5. Daniel has 12 apples. He puts 6 apples in each bag. Circle the apples to find the number of bags Daniel makes.

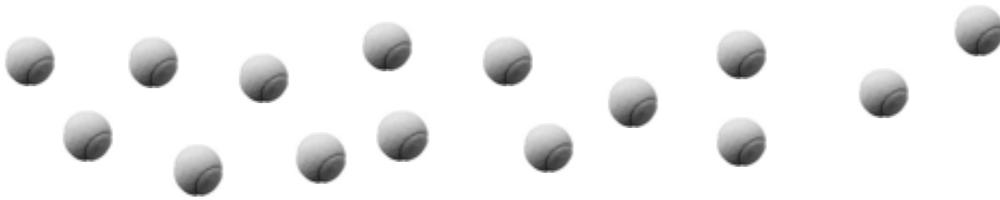


- a. Write a division sentence where the answer represents the number of Daniel's bags.
- b. Draw a number bond to represent the problem.
6. Jacob draws cats. He draws 4 legs on each cat for a total of 24 legs.
- a. Use a count-by to find the number of cats Jacob draws. Make a drawing to match your counting.
- b. Write a division sentence to represent the problem.

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Rick puts 15 tennis balls into cans. Each can holds 3 balls. Circle groups of 3 to show the balls in each can.



Rick needs \_\_\_\_\_ cans.

\_\_\_\_\_  $\times$  3 = 15

15  $\div$  3 = \_\_\_\_\_

2. Rick uses 15 tennis balls to make 5 equal groups. Draw to show how many tennis balls are in each group.

There are \_\_\_\_\_ tennis balls in each group.

5  $\times$  \_\_\_\_\_ = 15

15  $\div$  5 = \_\_\_\_\_

3. Use an array to model Problem 1.

a. \_\_\_\_\_  $\times$  3 = 15

15  $\div$  3 = \_\_\_\_\_

The number in the blanks represents

\_\_\_\_\_.

b. 5  $\times$  \_\_\_\_\_ = 15

15  $\div$  5 = \_\_\_\_\_

The number in the blanks represents

\_\_\_\_\_.

4. Deena makes 21 jars of tomato sauce. She puts 7 jars in each box to sell at the market. How many boxes does Deena need?

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

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

What is the meaning of the unknown factor and quotient? \_\_\_\_\_

---

5. The teacher gives the equation  $4 \times \underline{\quad} = 12$ . Charlie finds the answer by writing and solving  $12 \div 4 = \underline{\quad}$ . Explain why Charlie's method works.

6. The blanks in Problem 5 represent the size of the groups. Draw an array to represent the equations.

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Mr. Hannigan puts 12 pencils into boxes. Each box holds 4 pencils. Circle groups of 4 to show the pencils in each box.



Mr. Hannigan needs \_\_\_\_\_ boxes.

\_\_\_\_\_  $\times$  4 = 12

12  $\div$  4 = \_\_\_\_\_

2. Mr. Hannigan places 12 pencils into 3 equal groups. Draw to show how many pencils are in each group.

There are \_\_\_\_\_ pencils in each group.

3  $\times$  \_\_\_\_\_ = 12

12  $\div$  3 = \_\_\_\_\_

3. Use an array to model Problem 1.

a. \_\_\_\_\_  $\times$  4 = 12

b. 3  $\times$  \_\_\_\_\_ = 12

12  $\div$  4 = \_\_\_\_\_

12  $\div$  3 = \_\_\_\_\_

The number in the blanks represents

The number in the blanks represents

\_\_\_\_\_.

\_\_\_\_\_.

4. Judy washes 24 dishes. She then dries and stacks the dishes equally into 4 piles. How many dishes are in each pile?

$$24 \div 4 = \underline{\hspace{2cm}}$$

$$4 \times \underline{\hspace{2cm}} = 24$$

What is the meaning of the unknown factor and quotient? \_\_\_\_\_

---

5. Nate solves the equation  $\underline{\hspace{2cm}} \times 5 = 15$  by writing and solving  $15 \div 5 = \underline{\hspace{2cm}}$ . Explain why Nate's method works.
- 

6. The blanks in Problem 5 represent the number of groups. Draw an array to represent the equations.

Name \_\_\_\_\_

Date \_\_\_\_\_

1. a. Draw an array that shows 6 rows of 2.

b. Write a multiplication sentence where the first factor represents the number of rows.

\_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

2. a. Draw an array that shows 2 rows of 6.

b. Write a multiplication sentence where the first factor represents the number of rows.

\_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

3. a. Turn your paper to look at the arrays in Problems 1 and 2 in different ways. What is the same and what is different about them?

b. Why are the factors in your multiplication sentences in a different order?

4. Write a multiplication sentence for each expression. You might skip-count to find the totals.

a. 6 twos:  $6 \times 2 = 12$ 

d. 2 sevens: \_\_\_\_\_

**Extension:**

b. 2 sixes: \_\_\_\_\_

e. 9 twos: \_\_\_\_\_

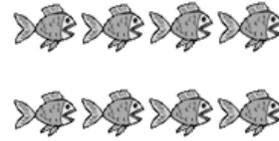
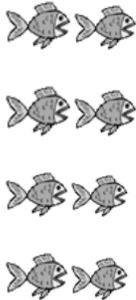
g. 11 twos: \_\_\_\_\_

c. 7 twos: \_\_\_\_\_

f. 2 nines: \_\_\_\_\_

h. 2 twelves: \_\_\_\_\_

5. Write and solve multiplication sentences where the second factor represents the size of the row.

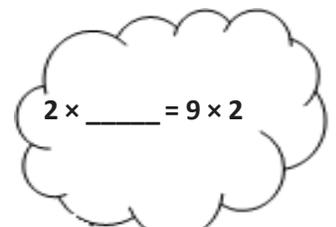
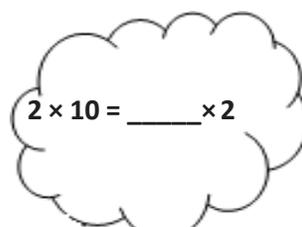
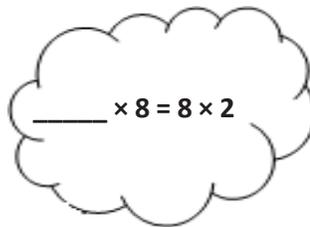
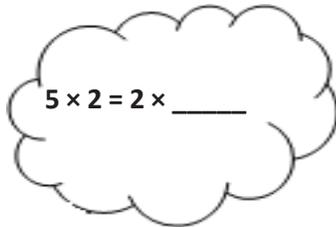


\_\_\_\_\_

\_\_\_\_\_

6. Ms. Nenadal writes  $2 \times 7 = 7 \times 2$  on the board. Do you agree or disagree? Draw arrays to help explain your thinking.

7. Find the missing factor to make each equation true.



8. Jada gets 2 new packs of erasers. Each pack has 6 erasers in it.
- Draw an array to show how many erasers Jada has altogether.
  - Write and solve a multiplication sentence to describe the array.
  - Use the commutative property to write and solve a different multiplication sentence for the array.

Name \_\_\_\_\_

Date \_\_\_\_\_

1. a. Draw an array that shows 7 rows of 2.

b. Write a multiplication sentence where the first factor represents the number of rows.

\_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

2. a. Draw an array that shows 2 rows of 7.

b. Write a multiplication sentence where the first factor represents the number of rows.

\_\_\_\_\_ × \_\_\_\_\_ = \_\_\_\_\_

3. a. Turn your paper to look at the arrays in Problems 1 and 2 in different ways. What is the same and what is different about them?

b. Why are the factors in your multiplication sentences in a different order?

4. Write a multiplication sentence to match the number of groups. Skip-count to find the totals. The first one is done for you.

a. 2 twos:  $2 \times 2 = 4$ 

d. 2 fours: \_\_\_\_\_

g. 2 fives: \_\_\_\_\_

b. 3 twos: \_\_\_\_\_

e. 4 twos: \_\_\_\_\_

h. 6 twos: \_\_\_\_\_

c. 2 threes: \_\_\_\_\_

f. 5 twos: \_\_\_\_\_

i. 2 sixes: \_\_\_\_\_

5. Write and solve multiplication sentences where the second factor represents the size of the row.



\_\_\_\_\_



\_\_\_\_\_

6. Angel writes  $2 \times 8 = 8 \times 2$  in his notebook. Do you agree or disagree? Draw arrays to help explain your thinking.

7. Find the missing factor to make each equation true.

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

$$\underline{\quad} \times 2 = 2 \times 7$$

$$9 \times 2 = \underline{\quad} \times 9$$

$$2 \times \underline{\quad} = 10 \times 2$$

8. Tamia buys 2 bags of candy. Each bag has 7 pieces of candy in it.  
a. Draw an array to show how many pieces of candy Tamia has altogether.

- b. Write and solve a multiplication sentence to describe the array.

- c. Use the commutative property to write and solve a different multiplication sentence for the array.

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Draw an array that shows 5 rows of 3.

2. Draw an array that shows 3 rows of 5.

3. Write multiplication expressions for the arrays in Problems 1 and 2. Let the first factor in each expression represent the number of rows. Use the commutative property to make sure the equation below is true.

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

**Problem 1**                      **Problem 2**

4. Write a multiplication sentence for each expression. You might skip-count to find the totals. The first one is done for you.

a. 2 threes:  $2 \times 3 = 6$ 

d. 4 threes: \_\_\_\_\_

g. 3 nines: \_\_\_\_\_

b. 3 twos: \_\_\_\_\_

e. 3 sevens: \_\_\_\_\_

h. 9 threes: \_\_\_\_\_

c. 3 fours: \_\_\_\_\_

f. 7 threes: \_\_\_\_\_

i. 10 threes: \_\_\_\_\_

5. Find the unknowns that make the equations true. Then, draw a line to match related facts.

a.  $3 + 3 + 3 + 3 + 3 =$  \_\_\_\_\_d.  $3 \times 8 =$  \_\_\_\_\_b.  $3 \times 9 =$  \_\_\_\_\_e. \_\_\_\_\_  $= 5 \times 3$ 

c. 7 threes + 1 three = \_\_\_\_\_

f.  $27 = 9 \times$  \_\_\_\_\_

6. Isaac picks 3 tangerines from his tree every day for 7 days.
- Use circles to draw an array that represents the tangerines Isaac picks.
  - How many tangerines does Isaac pick in 7 days? Write and solve a multiplication sentence to find the total.
  - Isaac decides to pick 3 tangerines every day for 3 more days. Draw x's to show the new tangerines on the array in Part (a).
  - Write and solve a multiplication sentence to find the total number of tangerines Isaac picks.
7. Sarah buys bottles of soap. Each bottle costs \$2.
- How much money does Sarah spend if she buys 3 bottles of soap?

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \$ \underline{\hspace{2cm}}$$

- How much money does Sarah spend if she buys 6 bottles of soap?

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \$ \underline{\hspace{2cm}}$$

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Draw an array that shows 6 rows of 3.

2. Draw an array that shows 3 rows of 6.

3. Write multiplication expressions for the arrays in Problems 1 and 2. Let the first factor in each expression represent the number of rows. Use the commutative property to make sure the equation below is true.

$$\begin{array}{c} \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} \\ \text{Problem 1} \qquad \qquad \text{Problem 2} \end{array}$$

4. Write a multiplication sentence for each expression. You might skip-count to find the totals. The first one is done for you.

a. 5 threes:  $5 \times 3 = 15$       d. 3 sixes: \_\_\_\_\_      g. 8 threes: \_\_\_\_\_

b. 3 fives: \_\_\_\_\_      e. 7 threes: \_\_\_\_\_      h. 3 nines: \_\_\_\_\_

c. 6 threes: \_\_\_\_\_      f. 3 sevens: \_\_\_\_\_      i. 10 threes: \_\_\_\_\_

5. Find the unknowns that make the equations true. Then, draw a line to match related facts.

a.  $3 + 3 + 3 + 3 + 3 + 3 =$  \_\_\_\_\_

d.  $3 \times 9 =$  \_\_\_\_\_

b.  $3 \times 5 =$  \_\_\_\_\_

e. \_\_\_\_\_  $= 6 \times 3$

c.  $8 \text{ threes} + 1 \text{ three} =$  \_\_\_\_\_

f.  $15 = 5 \times$  \_\_\_\_\_

6. Fernando puts 3 pictures on each page of his photo album. He puts pictures on 8 pages.
- Use circles to draw an array that represents the total number of pictures in Fernando's photo album.
  - Use your array to write and solve a multiplication sentence to find Fernando's total number of pictures.
  - Fernando adds 2 more pages to his book. He puts 3 pictures on each new page. Draw x's to show the new pictures on the array in Part (a).
  - Write and solve a multiplication sentence to find the new total number of pictures in Fernando's album.
7. Ivania recycles. She gets 3 cents for every can she recycles.
- How much money does Ivania make if she recycles 4 cans?  
 $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$  cents
  - How much money does Ivania make if she recycles 7 cans?  
 $\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$  cents

Name \_\_\_\_\_

Date \_\_\_\_\_

1. The team organizes soccer balls into 2 rows of 5. The coach adds 3 rows of 5 soccer balls. Complete the equations to describe the total array.



a.  $(5 + 5) + (5 + 5 + 5) =$  \_\_\_\_\_

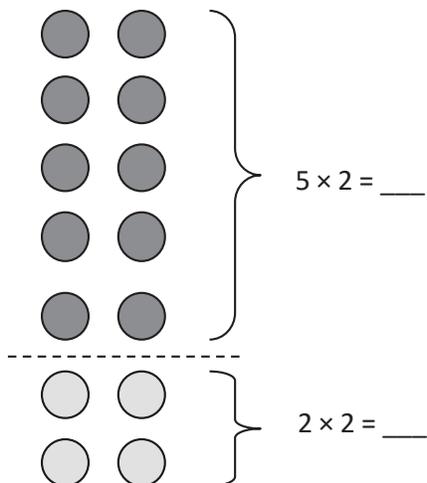


b. 2 fives + \_\_\_\_\_ fives = \_\_\_\_\_ fives

c. \_\_\_\_\_  $\times 5 =$  \_\_\_\_\_

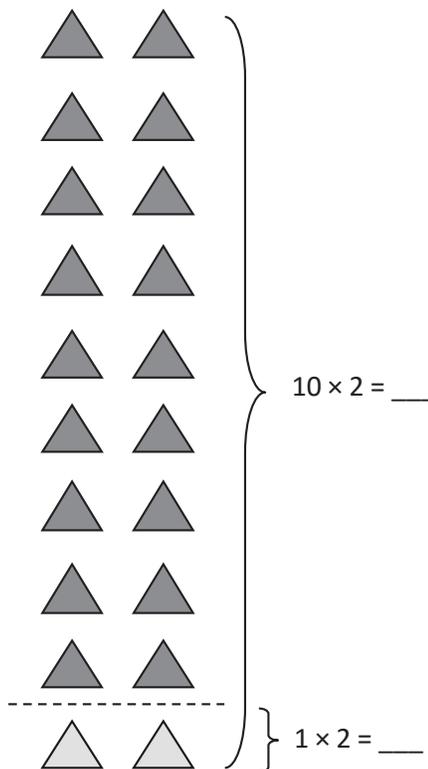
2.  $7 \times 2 =$  \_\_\_\_\_

3.  $9 \times 2 =$  \_\_\_\_\_



$10 + 4 =$  \_\_\_\_\_

\_\_\_\_\_  $\times 2 = 14$



$20 -$  \_\_\_\_\_  $= 18$

$9 \times 2 =$  \_\_\_\_\_

4. Matthew organizes his baseball cards in 4 rows of 3.
- a. Draw an array that represents Matthew's cards using an x to show each card.

b. Solve the equation to find Matthew's total number of cards.  $4 \times 3 = \underline{\hspace{2cm}}$

5. Matthew adds 2 more rows. Use circles to show his new cards on the array in Problem 4(a).
- a. Write and solve a multiplication equation to represent the circles you added to the array.

$$\underline{\hspace{2cm}} \times 3 = \underline{\hspace{2cm}}$$

- b. Add the totals from the equations in Problems 4(b) and 5(a) to find Matthew's total cards.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 18$$

- c. Write the multiplication equation that shows Matthew's total number of cards.

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = 18$$

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Dan organizes his stickers into 3 rows of four. Irene adds 2 more rows of stickers. Complete the equations to describe the total number of stickers in the array.

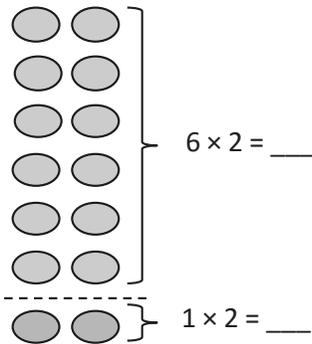


a.  $(4 + 4 + 4) + (4 + 4) = \underline{\hspace{2cm}}$

b. 3 fours +  $\underline{\hspace{1cm}}$  fours =  $\underline{\hspace{2cm}}$  fours

c.  $\underline{\hspace{1cm}} \times 4 = \underline{\hspace{2cm}}$

2.  $7 \times 2 = \underline{\hspace{2cm}}$



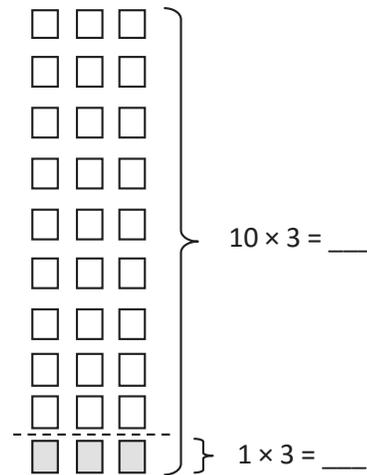
$6 \times 2 = \underline{\hspace{1cm}}$

$1 \times 2 = \underline{\hspace{1cm}}$

$12 + 2 = \underline{\hspace{2cm}}$

$\underline{\hspace{1cm}} \times 2 = 14$

3.  $9 \times 3 = \underline{\hspace{2cm}}$



$10 \times 3 = \underline{\hspace{1cm}}$

$1 \times 3 = \underline{\hspace{1cm}}$

$30 - \underline{\hspace{1cm}} = 27$

$\underline{\hspace{1cm}} \times 3 = 27$

4. Franklin collects stickers. He organizes his stickers in 5 rows of four.
- a. Draw an array to represent Franklin's stickers. Use an x to show each sticker.

b. Solve the equation to find Franklin's total number of stickers.  $5 \times 4 = \underline{\hspace{2cm}}$

5. Franklin adds 2 more rows. Use circles to show his new stickers on the array in Problem 4(a).

a. Write and solve an equation to represent the circles you added to the array.

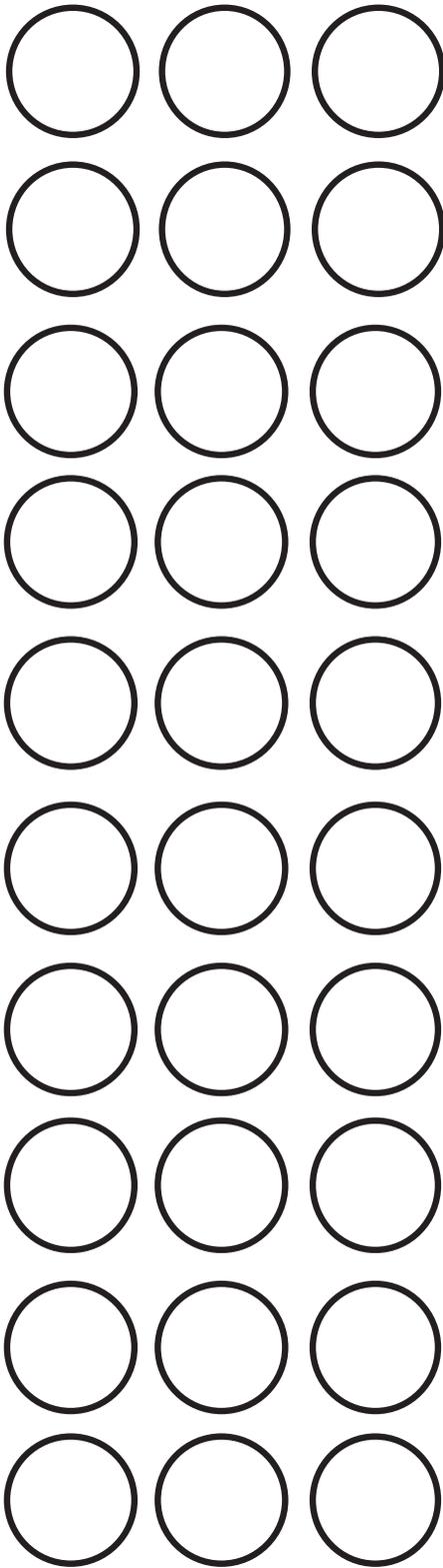
$$\underline{\hspace{2cm}} \times 4 = \underline{\hspace{2cm}}$$

- b. Complete the equation to show how you add the totals of 2 multiplication facts to find Franklin's total number of stickers.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = 28$$

- c. Complete the unknown to show Franklin's total number of stickers.

$$\underline{\hspace{2cm}} \times 4 = 28$$



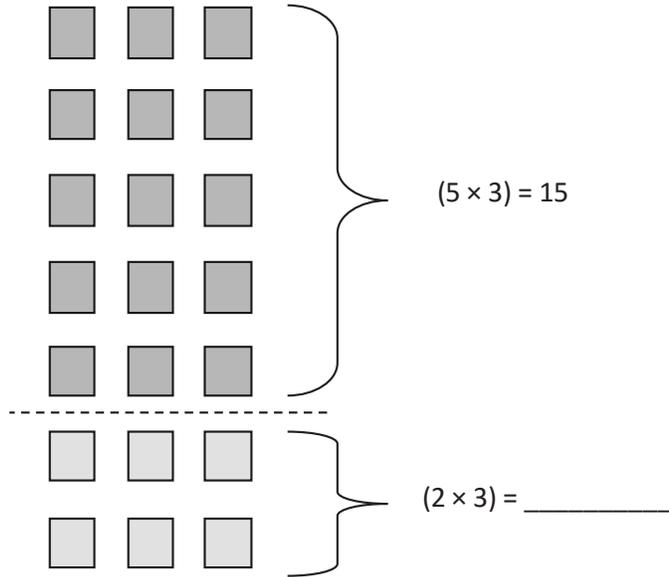
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threes array no fill

Name \_\_\_\_\_

Date \_\_\_\_\_

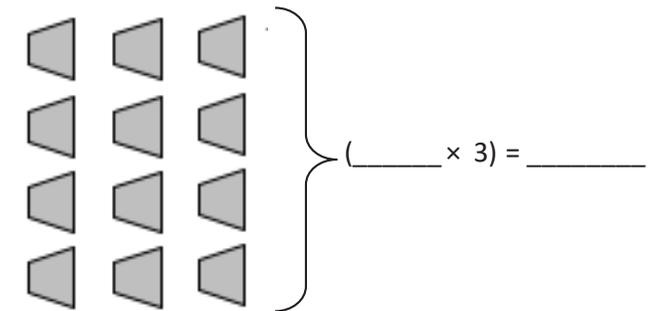
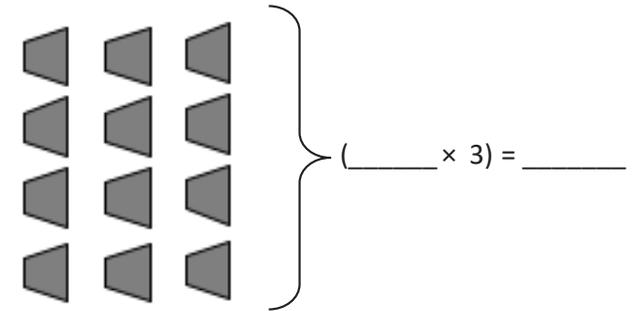
1.  $7 \times 3 = (5 \times 3) + (2 \times 3) =$  \_\_\_\_\_



$(5 \times 3) + (2 \times 3) = 15 +$  \_\_\_\_\_

$15 +$  \_\_\_\_\_  $=$  \_\_\_\_\_

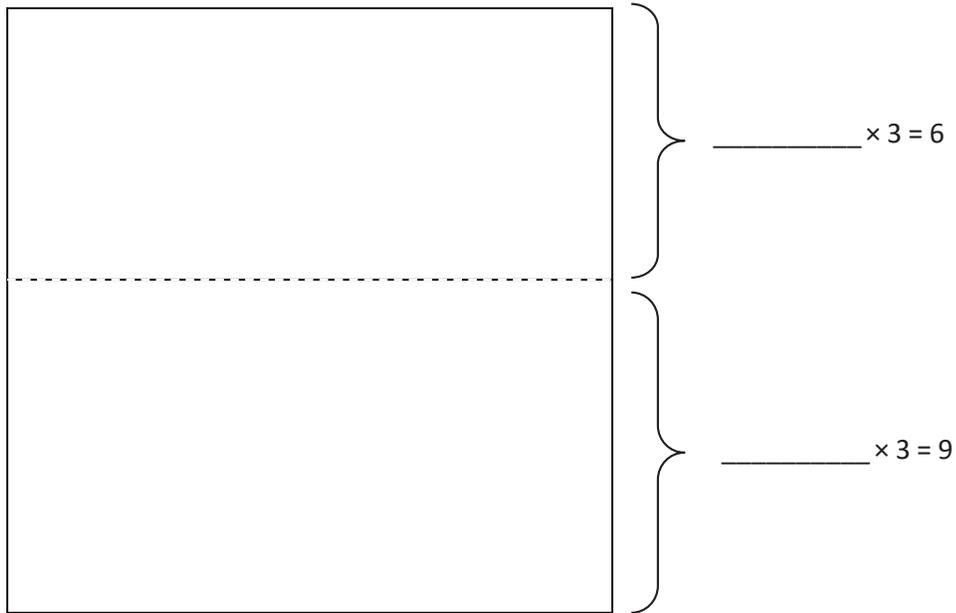
2.  $8 \times 3 = (4 \times 3) + (4 \times 3) =$  \_\_\_\_\_



$(4 \times 3) + (4 \times 3) =$  \_\_\_\_\_  $+$  \_\_\_\_\_

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

3. Ruby makes a photo album. One page is shown below. Ruby puts 3 photos in each row.
- a. Fill in the equations on the right. Use them to help you draw arrays that show the photos on the top and bottom parts of the page.



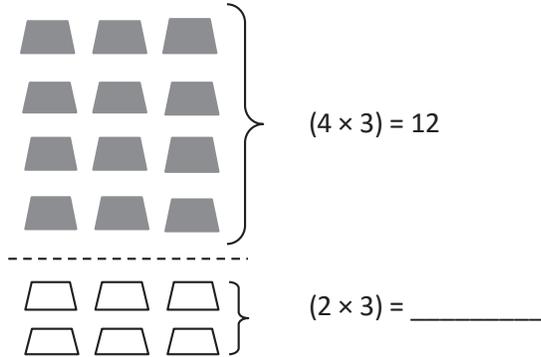
- b. Ruby calculates the total number of photos as shown below. Use the array you drew to help explain Ruby's calculation.

$$5 \times 3 = 6 + 9 = 15$$

Name \_\_\_\_\_

Date \_\_\_\_\_

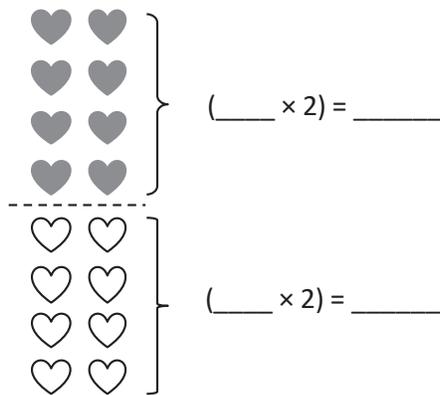
1.  $6 \times 3 =$  \_\_\_\_\_



$12 + \underline{\quad} = \underline{\quad}$

$6 \times 3 = \underline{\quad}$

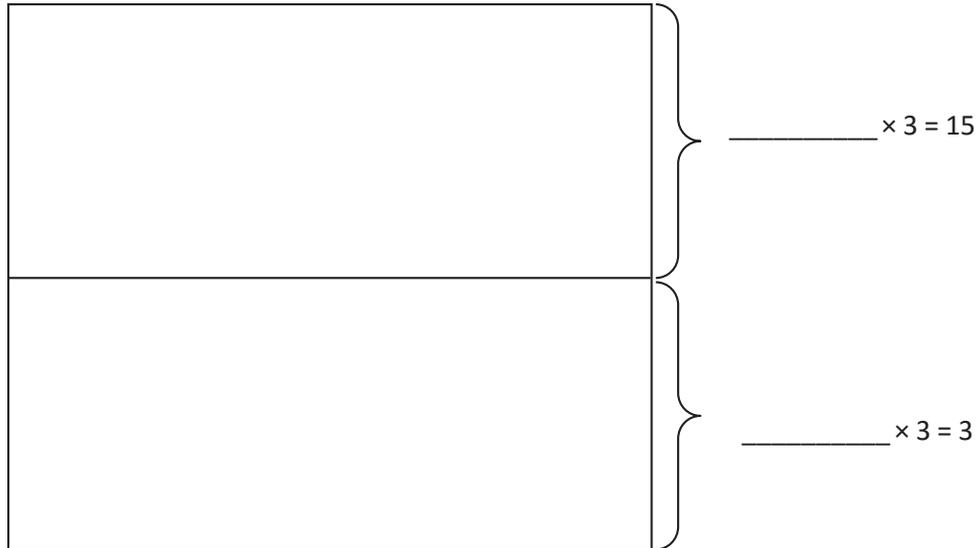
2.  $8 \times 2 =$  \_\_\_\_\_



$(4 \times 2) + (4 \times 2) = \underline{\quad} + \underline{\quad}$

$\underline{\quad} \times 2 = \underline{\quad}$

3. Adriana organizes her books on shelves. She puts 3 books in each row.
- a. Fill in the equations on the right. Use them to draw arrays that show the books on Adriana's top and bottom shelves.



- b. Adriana calculates the total number of books as shown below. Use the array you drew to help explain Adriana's calculation.

$$6 \times 3 = 15 + 3 = 18$$

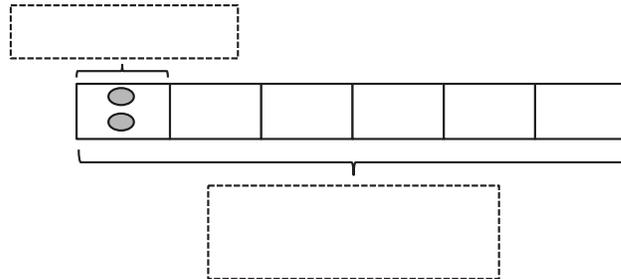
Name \_\_\_\_\_

Date \_\_\_\_\_

1. Mrs. Prescott has 12 oranges. She puts 2 oranges in each bag. How many bags does she have?
- a. Draw an array where each column shows a bag of oranges.

$$\underline{\hspace{2cm}} \div 2 = \underline{\hspace{2cm}}$$

- b. Redraw the oranges in each bag as a unit in the tape diagram. The first unit is done for you. As you draw, label the diagram with known and unknown information from the problem.



2. Mrs. Prescott arranges 18 plums into 6 bags. How many plums are in each bag? Model the problem with both an array and a labeled tape diagram. Show each column as the number of plums in each bag.

There are \_\_\_\_\_ plums in each bag.

3. Fourteen shopping baskets are stacked equally in 7 piles. How many baskets are in each pile? Model the problem with both an array and a labeled tape diagram. Show each column as the number of baskets in each pile.
4. In the back of the store, Mr. Prescott packs 24 bell peppers equally into 8 bags. How many bell peppers are in each bag? Model the problem with both an array and a labeled tape diagram. Show each column as the number of bell peppers in each bag.
5. Olga saves \$2 a week to buy a toy car. The car costs \$16. How many weeks will it take her to save enough to buy the toy?

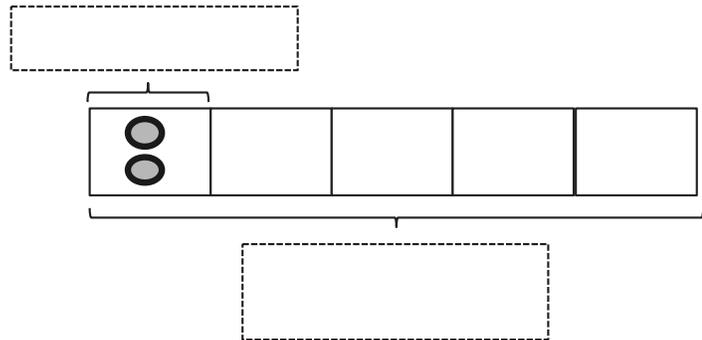
Name \_\_\_\_\_

Date \_\_\_\_\_

1. Fred has 10 pears. He puts 2 pears in each basket. How many baskets does he have?
- a. Draw an array where each column represents the number of pears in each basket.

$$\underline{\hspace{2cm}} \div 2 = \underline{\hspace{2cm}}$$

- b. Redraw the pears in each basket as a unit in the tape diagram. Label the diagram with known and unknown information from the problem.



2. Ms. Meyer organizes 15 clipboards equally into 3 boxes. How many clipboards are in each box? Model the problem with both an array and a labeled tape diagram. Show each column as the number of clipboards in each box.

There are \_\_\_\_\_ clipboards in each box.

3. Sixteen action figures are arranged equally on 2 shelves. How many action figures are on each shelf? Model the problem with both an array and a labeled tape diagram. Show each column as the number of action figures on each shelf.
4. Jasmine puts 18 hats away. She puts an equal number of hats on 3 shelves. How many hats are on each shelf? Model the problem with both an array and a labeled tape diagram. Show each column as the number of hats on each shelf.
5. Corey checks out 2 books a week from the library. How many weeks will it take him to check out a total of 14 books?

Name \_\_\_\_\_

Date \_\_\_\_\_

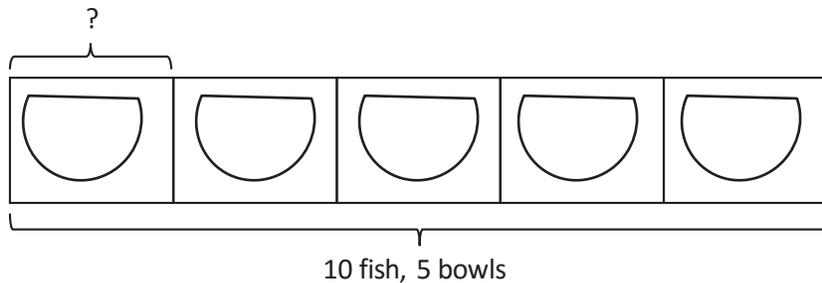
1. There are 8 birds at the pet store. Two birds are in each cage. Circle to show how many cages there are.



$8 \div 2 = \underline{\hspace{2cm}}$

There are \_\_\_\_\_ cages of birds.

2. The pet store sells 10 fish. They equally divide the fish into 5 bowls. Draw fish to find the number in each bowl.

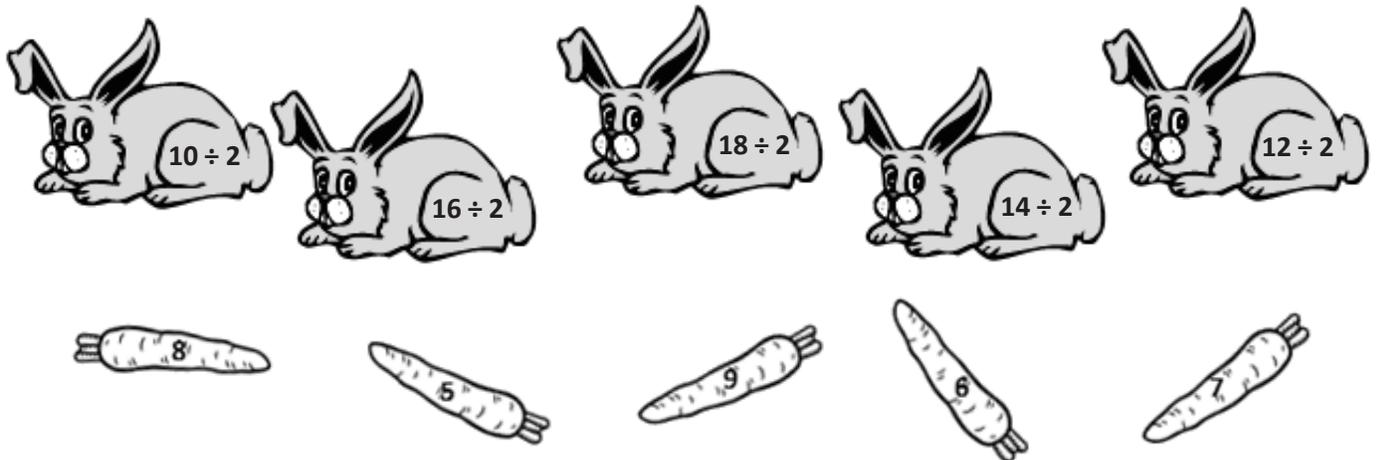


$5 \times \underline{\hspace{2cm}} = 10$

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

There are \_\_\_\_\_ fish in each bowl.

3. Match.



4. Laina buys 14 meters of ribbon. She cuts her ribbon into 2 equal pieces. How many meters long is each piece? Label the tape diagram to represent the problem, including the unknown.



Each piece is \_\_\_\_\_ meters long.

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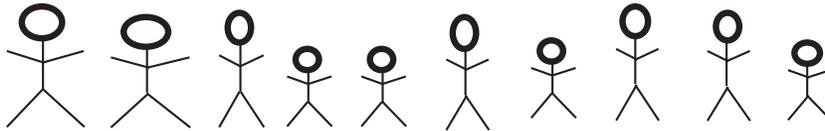
5. Roy eats 2 cereal bars every morning. Each box has a total of 12 bars. How many days will it take Roy to finish 1 box?

6. Sarah and Esther equally share the cost of a present. The present costs \$18. How much does Sarah pay?

Name \_\_\_\_\_

Date \_\_\_\_\_

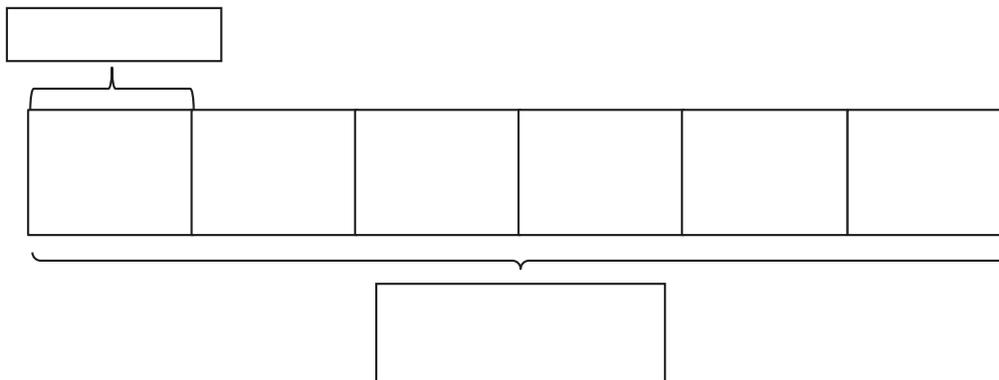
1. Ten people wait in line for the roller coaster. Two people sit in each car. Circle to find the total number of cars needed.



$10 \div 2 = \underline{\hspace{2cm}}$

There are \_\_\_\_\_ cars needed.

2. Mr. Ramirez divides 12 frogs equally into 6 groups for students to study. Draw frogs to find the number in each group. Label known and unknown information on the tape diagram to help you solve.

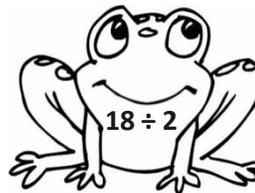
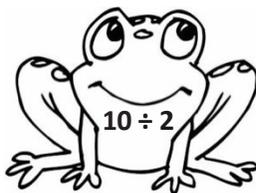


$6 \times \underline{\hspace{2cm}} = 12$

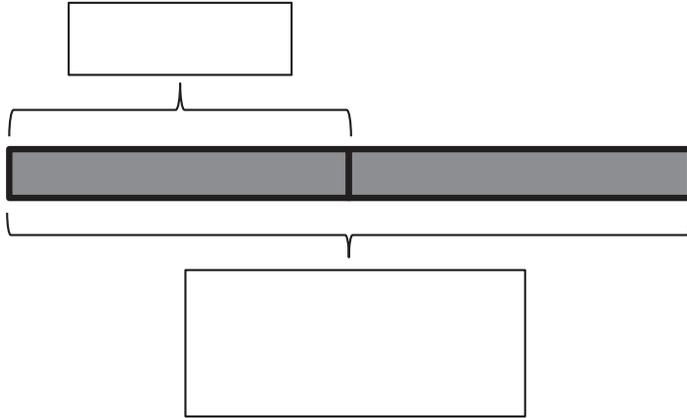
$12 \div 6 = \underline{\hspace{2cm}}$

There are \_\_\_\_\_ frogs in each group.

3. Match.



4. Betsy pours 16 cups of water to equally fill 2 bottles. How many cups of water are in each bottle? Label the tape diagram to represent the problem, including the unknown.



There are \_\_\_\_\_ cups of water in each bottle.

5. An earthworm tunnels 2 centimeters into the ground each day. The earthworm tunnels at about the same pace every day. How many days will it take the earthworm to tunnel 14 centimeters?

6. Sebastian and Teshawn go to the movies. The tickets cost \$16 in total. The boys share the cost equally. How much does Teshawn pay?

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Fill in the blanks to make true number sentences.

$1 \times 3 = 3$   
 $3 \div 3 = \underline{\quad}$

$2 \times 3 = 6$   
 $6 \div 3 = \underline{\quad}$

$3 \times 3 = 9$   
 $\underline{\quad} \div 3 = 3$

$4 \times 3 = \underline{\quad}$   
 $\underline{\quad} \div 3 = 4$

$5 \times 3 = \underline{\quad}$   
 $\underline{\quad} \div 3 = 5$

$6 \times 3 = \underline{\quad}$   
 $\underline{\quad} \div 3 = 6$

$7 \times 3 = \underline{\quad}$   
 $\underline{\quad} \div 3 = 7$

$8 \times 3 = \underline{\quad}$   
 $\underline{\quad} \div 3 = 8$

$9 \times 3 = \underline{\quad}$   
 $\underline{\quad} \div 3 = 9$

$10 \times 3 = \underline{\quad}$   
 $\underline{\quad} \div 3 = 10$

2. Mr. Lawton picks tomatoes from his garden. He divides the tomatoes into bags of 3.

a. Circle to show how many bags he packs. Then, skip-count to show the total number of tomatoes.



b. Draw and label a tape diagram to represent the problem.

\_\_\_\_\_  $\div$  3 = \_\_\_\_\_

Mr. Lawton packs \_\_\_\_\_ bags of tomatoes.

3. Camille buys a sheet of stamps that measures 15 centimeters long. Each stamp is 3 centimeters long. How many stamps does Camille buy? Draw and label a tape diagram to solve.

Camille buys \_\_\_\_\_ stamps.

---

4. Thirty third-graders go on a field trip. They are equally divided into 3 vans. How many students are in each van?

5. Some friends spend \$24 altogether on frozen yogurt. Each person pays \$3. How many people buy frozen yogurt?

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Fill in the blanks to make true number sentences.

$2 \times 3 = 6$ $6 \div 3 = \underline{\quad}$
--

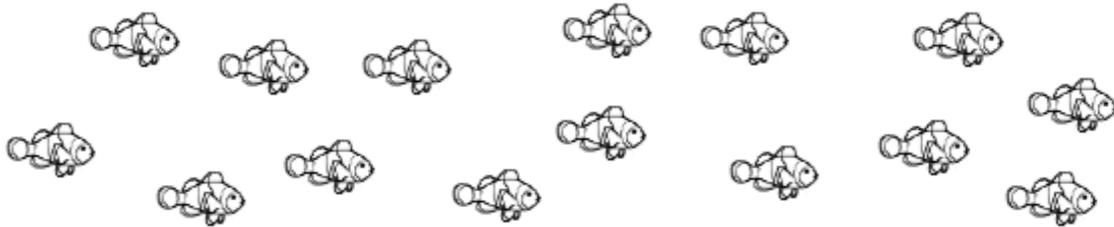
$1 \times 3 = \underline{\quad}$ $\underline{\quad} \div 3 = 1$
--

$7 \times 3 = \underline{\quad}$ $\underline{\quad} \div 3 = 7$
--

$9 \times 3 = \underline{\quad}$ $\underline{\quad} \div 3 = 9$
--

2. Ms. Gillette's pet fish are shown below. She keeps 3 fish in each tank.

- a. Circle to show how many fish tanks she has. Then, skip-count to find the total number of fish.



- b. Draw and label a tape diagram to represent the problem.

$$\underline{\hspace{2cm}} \div 3 = \underline{\hspace{2cm}}$$

Ms. Gillette has            fish tanks.

3. Juan buys 18 meters of wire. He cuts the wire into pieces that are each 3 meters long. How many pieces of wire does he cut?

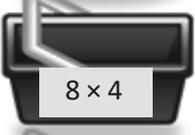
- 
4. A teacher has 24 pencils. They are divided equally among 3 students. How many pencils does each student get?

- 
5. There are 27 third-graders working in groups of 3. How many groups of third-graders are there?

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Skip-count by fours. Match each answer to the appropriate expression.

				<input type="text" value="4"/>	
				<input type="text" value="8"/>	
				<input type="text"/>	
				<input type="text"/>	
				<input type="text"/>	
				<input type="text"/>	
				<input type="text"/>	
				<input type="text"/>	
				<input type="text"/>	
				<input type="text"/>	

2. Mr. Schmidt replaces each of the 4 wheels on 7 cars. How many wheels does he replace? Draw and label a tape diagram to solve.

Mr. Schmidt replaces \_\_\_\_\_ wheels.

---

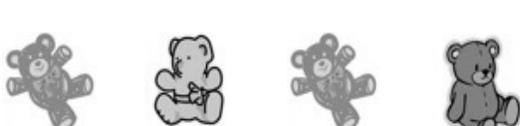
3. Trina makes 4 bracelets. Each bracelet has 6 beads. Draw and label a tape diagram to show the total number of beads Trina uses.

4. Find the total number of sides on 5 rectangles.

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Skip-count by fours. Match each answer to the appropriate expression.

	<input type="text" value="4"/>	
	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	
	<input type="text"/>	
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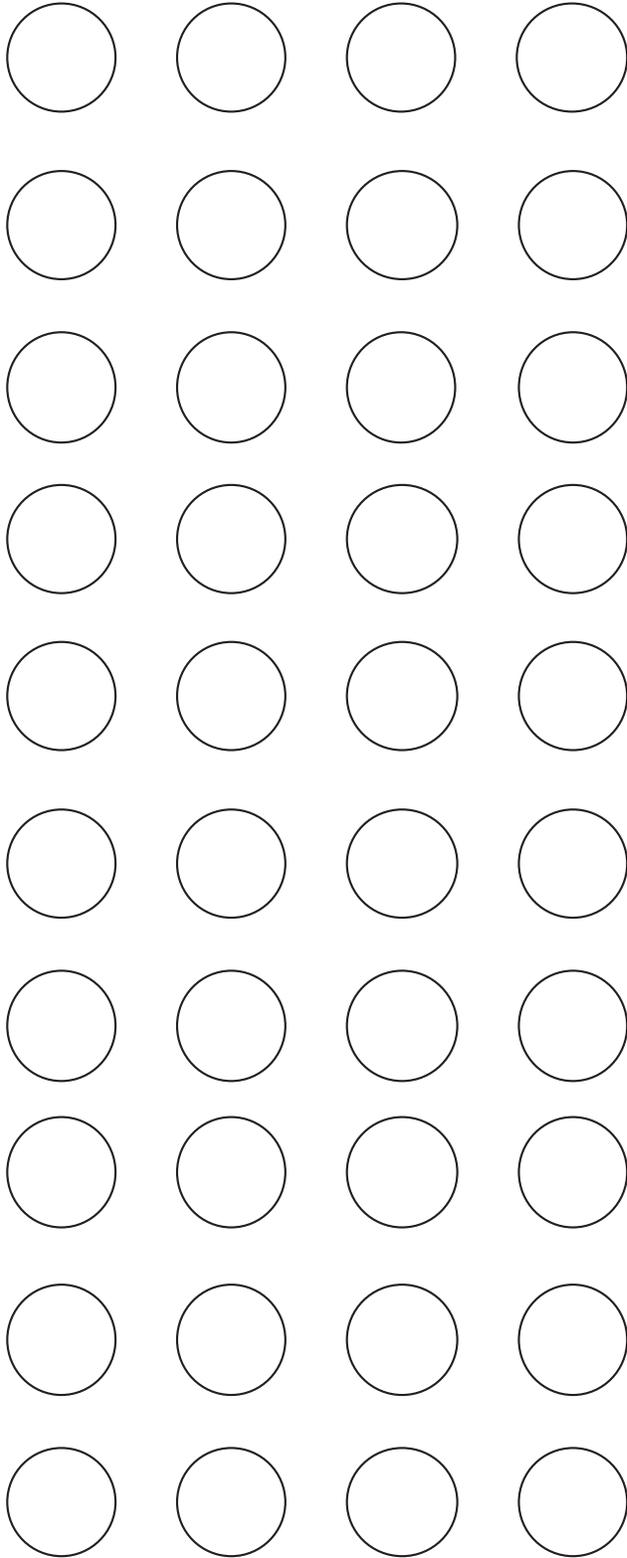
2. Lisa places 5 rows of 4 juice boxes in the refrigerator. Draw an array and skip-count to find the total number of juice boxes.

There are \_\_\_\_\_ juice boxes in total.

---

3. Six folders are placed on each table. How many folders are there on 4 tables? Draw and label a tape diagram to solve.

4. Find the total number of corners on 8 squares.



---

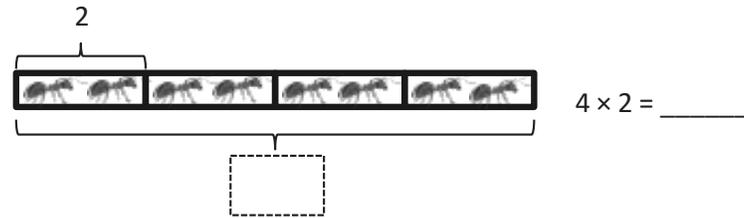
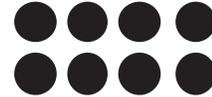
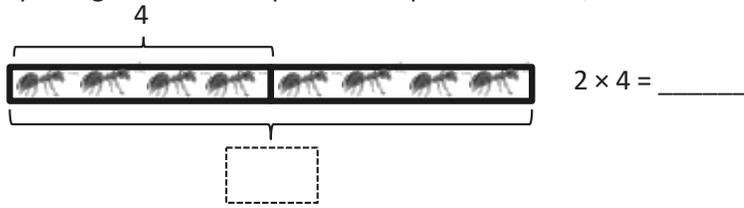
fours array

Name \_\_\_\_\_

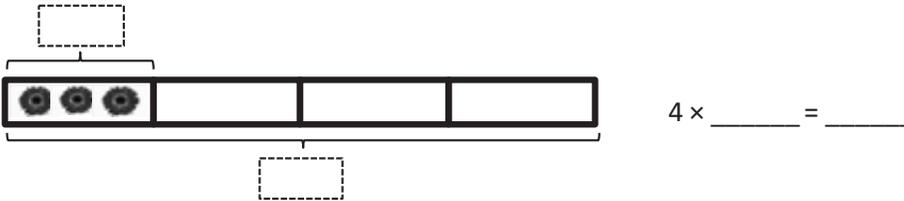
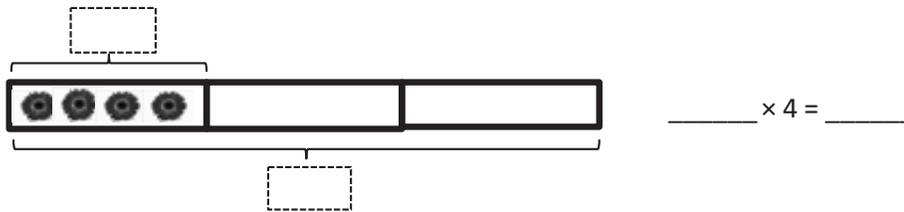
Date \_\_\_\_\_

1. Label the tape diagrams and complete the equations. Then, draw an array to represent the problems.

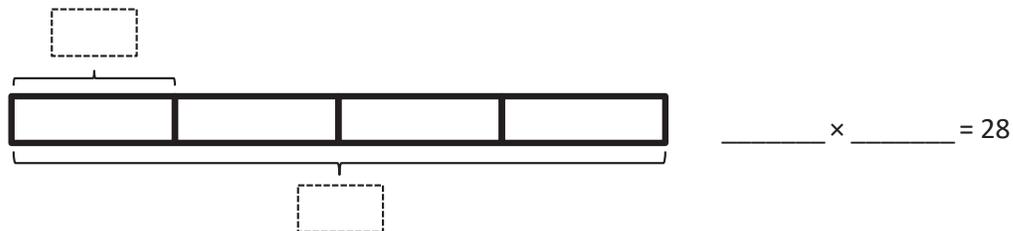
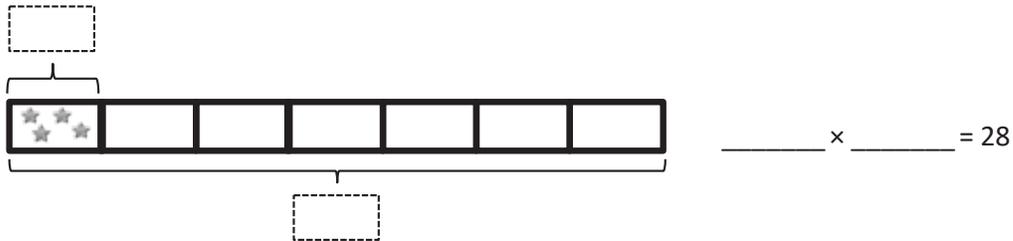
a.



b.



c.



2. Draw and label 2 tape diagrams to model why the statement in the box is true.

$$4 \times 6 = 6 \times 4$$

- 
3. Grace picks 4 flowers from her garden. Each flower has 8 petals. Draw and label a tape diagram to show how many petals there are in total.

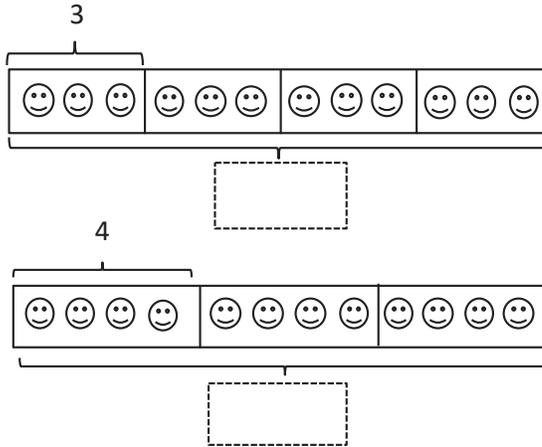
- 
4. Michael counts 8 chairs in his dining room. Each chair has 4 legs. How many chair legs are there altogether?

Name \_\_\_\_\_

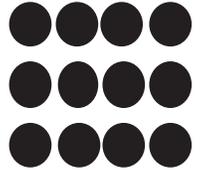
Date \_\_\_\_\_

1. Label the tape diagrams and complete the equations. Then, draw an array to represent the problems.

a.

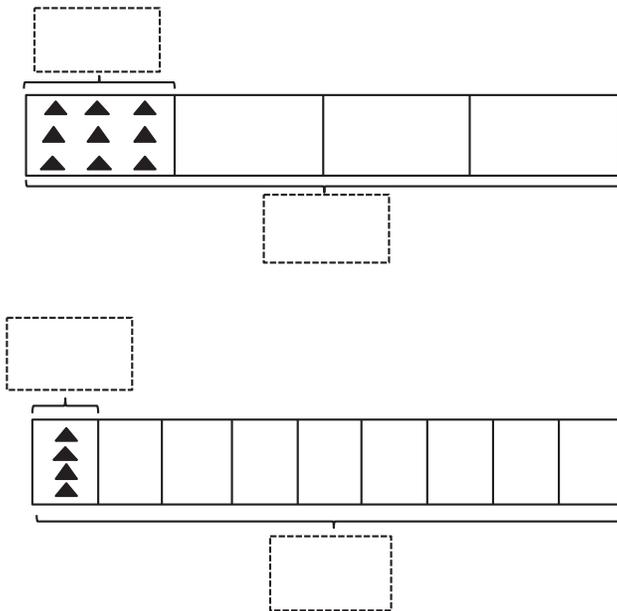


$4 \times 3 = \underline{\quad}$



$3 \times 4 = \underline{\quad}$

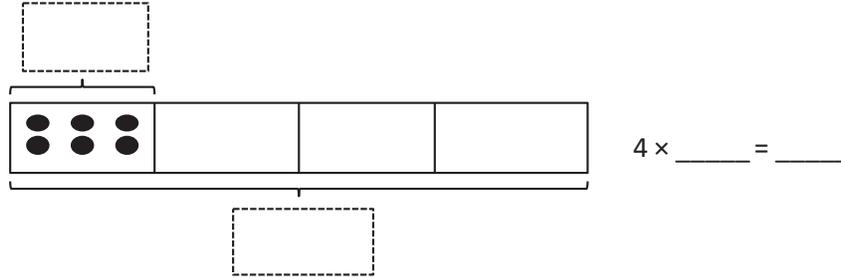
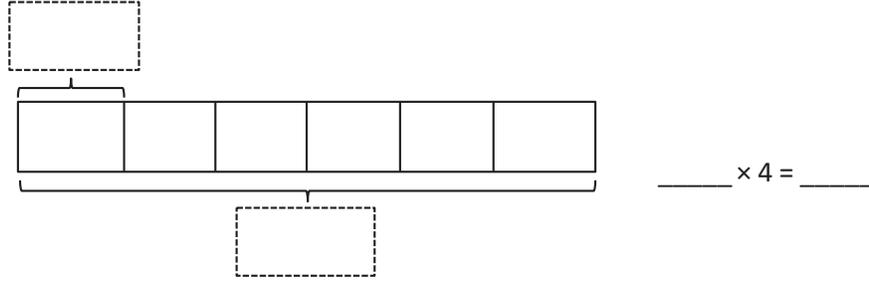
b.



$4 \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \times 4 = \underline{\quad}$

C.



2. Seven clowns hold 4 balloons each at the fair. Draw and label a tape diagram to show the total number of balloons the clowns hold.

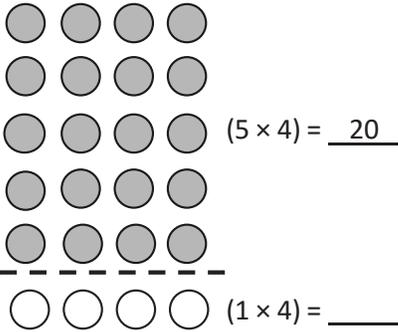
3. George swims 7 laps in the pool each day. How many laps does George swim after 4 days?

Name \_\_\_\_\_

Date \_\_\_\_\_

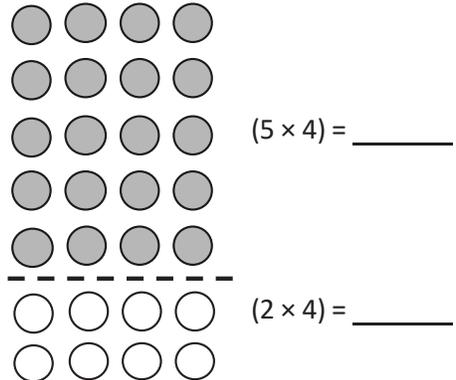
1. Label the array. Then, fill in the blanks below to make true number sentences.

a.  $6 \times 4 =$  \_\_\_\_\_



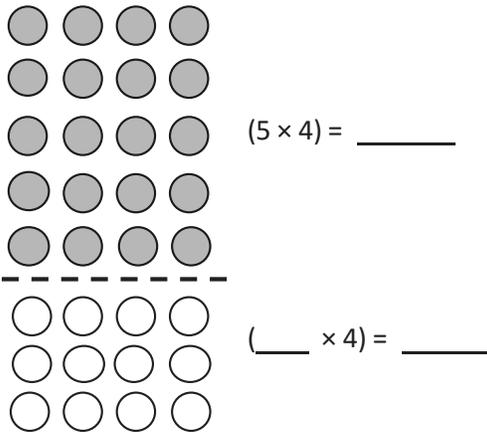
$(6 \times 4) = (5 \times 4) + (1 \times 4)$ $= 20 + \underline{\hspace{2cm}}$ $= \underline{\hspace{2cm}}$
---

b.  $7 \times 4 =$  \_\_\_\_\_



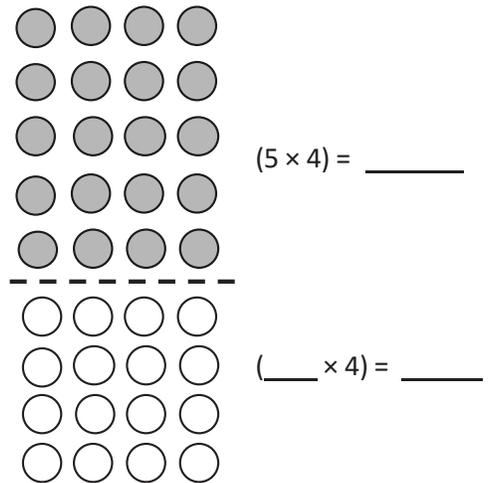
$(7 \times 4) = (5 \times 4) + (2 \times 4)$ $= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$ $= \underline{28}$
---

c.  $8 \times 4 =$  \_\_\_\_\_



$(8 \times 4) = (5 \times 4) + (\underline{\hspace{2cm}} \times 4)$ $= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$ $= \underline{\hspace{2cm}}$
--

d.  $9 \times 4 =$  \_\_\_\_\_



$(9 \times 4) = (5 \times 4) + (\underline{\hspace{2cm}} \times 4)$ $= \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$ $= \underline{\hspace{2cm}}$
--

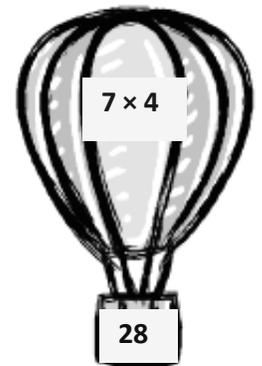
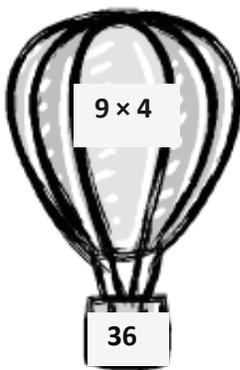
2. Match the equal expressions.

$(5 \times 4) + (3 \times 4)$

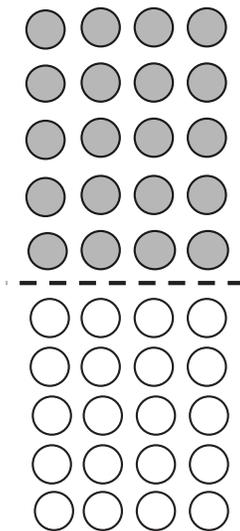
$(5 \times 4) + (1 \times 4)$

$(5 \times 4) + (4 \times 4)$

$(5 \times 4) + (2 \times 4)$



3. Nolan draws the array below to find the answer to the multiplication expression  $10 \times 4$ . He says, “ $10 \times 4$  is just double  $5 \times 4$ .” Explain Nolan’s strategy.

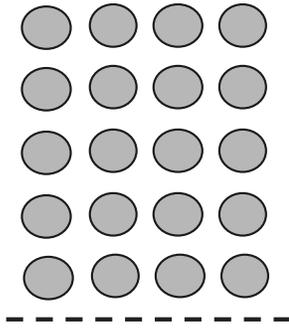


Name \_\_\_\_\_

Date \_\_\_\_\_

1. Label the array. Then, fill in the blanks below to make true number sentences.

a.  $6 \times 4 = \underline{\quad}$



$(5 \times 4) = \underline{20}$



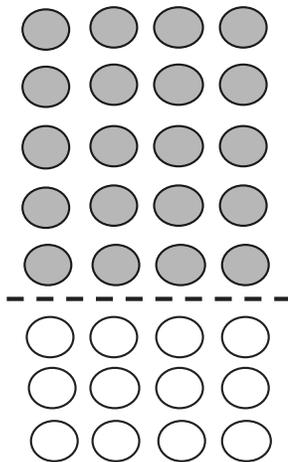
$(\underline{\quad} \times 4) = \underline{\quad}$

$(6 \times 4) = (5 \times 4) + (\underline{\quad} \times 4)$

$= \underline{20} + \underline{\quad}$

$= \underline{\quad}$

b.  $8 \times 4 = \underline{\quad}$



$(5 \times 4) = \underline{\quad}$

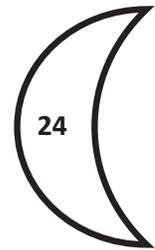
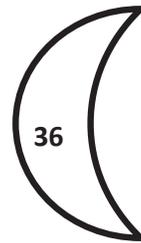
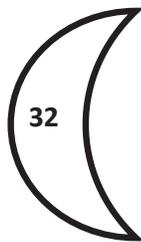
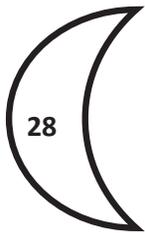
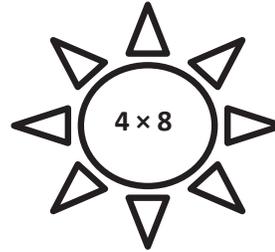
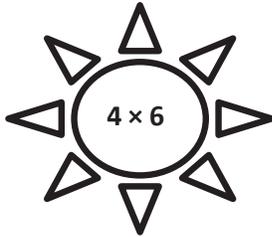
$(\underline{\quad} \times 4) = \underline{\quad}$

$(8 \times 4) = (5 \times 4) + (\underline{\quad} \times 4)$

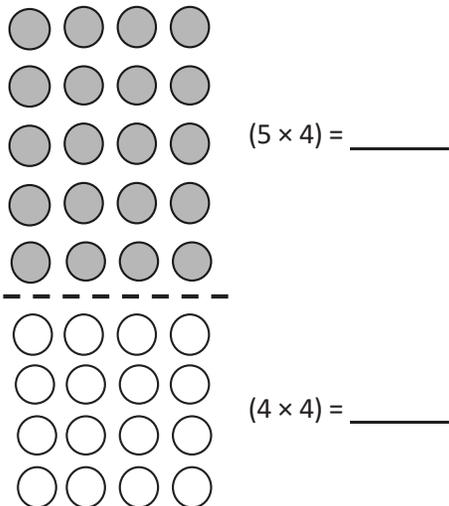
$= \underline{\quad} + \underline{\quad}$

$= \underline{\quad}$

2. Match the multiplication expressions with their answers.



3. The array below shows one strategy for solving  $9 \times 4$ . Explain the strategy using your own words.



Name \_\_\_\_\_

Date \_\_\_\_\_

1. Use the array to complete the related equations.



$1 \times 4 = \underline{4}$

$\underline{4} \div 4 = 1$



$2 \times 4 = \underline{\quad}$

$\underline{\quad} \div 4 = 2$



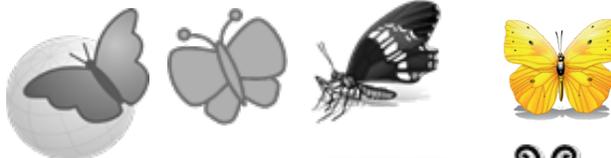
$\underline{\quad} \times 4 = 12$

$12 \div 4 = \underline{\quad}$



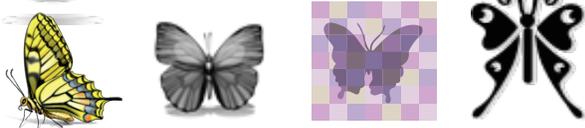
$\underline{\quad} \times 4 = 16$

$16 \div 4 = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = 20$

$20 \div \underline{\quad} = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = 24$

$24 \div \underline{\quad} = \underline{\quad}$



$\underline{\quad} \times 4 = \underline{\quad}$

$\underline{\quad} \div 4 = \underline{\quad}$



$\underline{\quad} \times 4 = \underline{\quad}$

$\underline{\quad} \div 4 = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \div \underline{\quad} = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \div \underline{\quad} = \underline{\quad}$

2. The baker packs 36 bran muffins in boxes of 4. Draw and label a tape diagram to find the number of boxes he packs.

- 
3. The waitress arranges 32 glasses into 4 equal rows. How many glasses are in each row?

- 
4. Janet paid \$28 for 4 notebooks. Each notebook costs the same amount. What is the cost of 2 notebooks?

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Use the array to complete the related equations.

$1 \times 4 = \underline{\quad}$

$\underline{\quad} \div 4 = 1$



$2 \times 4 = \underline{\quad}$

$\underline{\quad} \div 4 = 2$



$\underline{\quad} \times 4 = 12$

$12 \div 4 = \underline{\quad}$



$\underline{\quad} \times 4 = 16$

$16 \div 4 = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = 20$

$20 \div \underline{\quad} = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = 24$

$24 \div \underline{\quad} = \underline{\quad}$



$\underline{\quad} \times 4 = \underline{\quad}$

$\underline{\quad} \div 4 = \underline{\quad}$



$\underline{\quad} \times 4 = \underline{\quad}$

$\underline{\quad} \div 4 = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \div \underline{\quad} = \underline{\quad}$



$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

$\underline{\quad} \div \underline{\quad} = \underline{\quad}$



2. The teacher puts 32 students into groups of 4. How many groups does she make? Draw and label a tape diagram to solve.

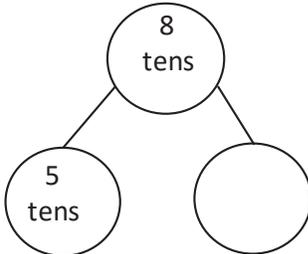
- 
3. The store clerk arranges 24 toothbrushes into 4 equal rows. How many toothbrushes are in each row?

- 
4. An art teacher has 40 paintbrushes. She divides them equally among her 4 students. She finds 8 more brushes and divides these equally among the students, as well. How many brushes does each student receive?

Name \_\_\_\_\_

Date \_\_\_\_\_

1.  $8 \times 10 =$  \_\_\_\_\_



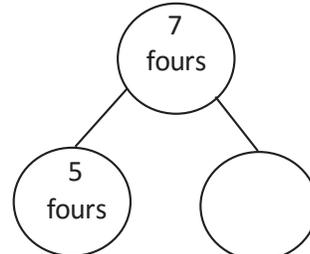
5 tens + \_\_\_\_\_ = 8 tens

$(5 \times 10) + (\text{_____} \times 10) = 8 \times 10$

50 + \_\_\_\_\_ = \_\_\_\_\_

$8 \times 10 =$  \_\_\_\_\_

2.  $7 \times 4 =$  \_\_\_\_\_



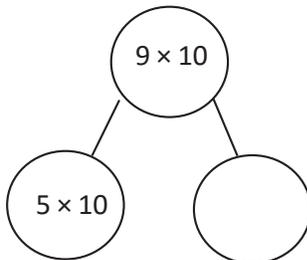
5 fours + \_\_\_\_\_ = 7 fours

$(5 \times 4) + (\text{_____} \times 4) = 7 \times 4$

20 + \_\_\_\_\_ = \_\_\_\_\_

$7 \times 4 =$  \_\_\_\_\_

3.  $9 \times 10 =$  \_\_\_\_\_



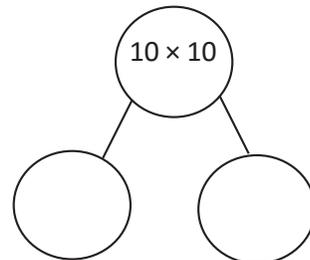
5 tens + \_\_\_\_\_ = 9 tens

$(5 \times 10) + (\text{_____} \times 10) = 9 \times 10$

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

$9 \times 10 =$  \_\_\_\_\_

4.  $10 \times 10 =$  \_\_\_\_\_



\_\_\_\_\_ + \_\_\_\_\_ = 10 tens

$(\text{_____} \times 10) + (\text{_____} \times 10) = 10 \times 10$

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

$10 \times 10 =$  \_\_\_\_\_

5. There are 7 teams in the soccer tournament. Ten children play on each team. How many children are playing in the tournament? Use the break apart and distribute strategy, and draw a number bond to solve.

There are \_\_\_\_\_ children playing in the tournament.

---

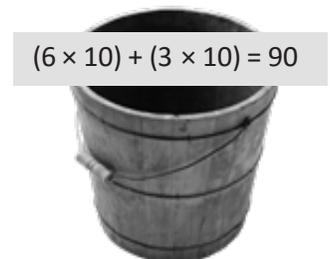
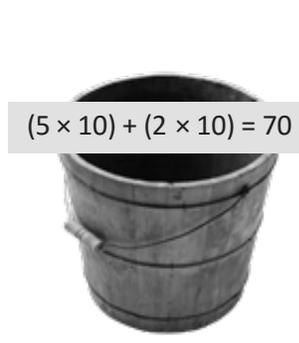
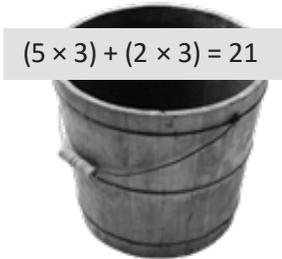
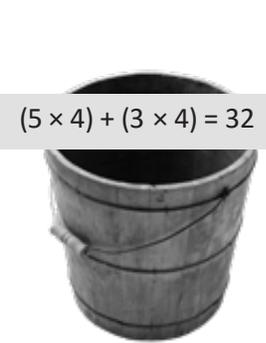
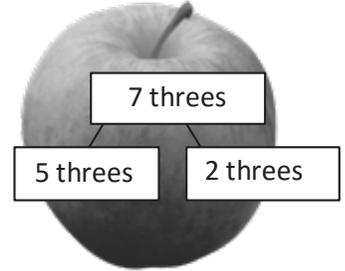
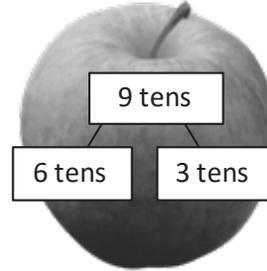
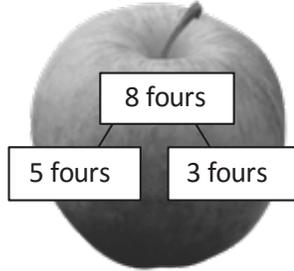
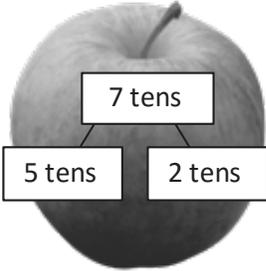
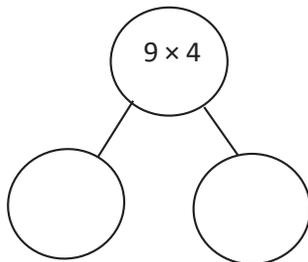
6. What is the total number of sides on 8 triangles?
- 

7. There are 12 rows of bottled drinks in the vending machine. Each row has 10 bottles. How many bottles are in the vending machine?

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Match.

2.  $9 \times 4 =$  \_\_\_\_\_

$$(\quad \times 4) + (\quad \times 4) = 9 \times 4$$

$$\quad + \quad = \quad$$

$$9 \times 4 = \quad$$

3. Lydia makes 10 pancakes. She tops each pancake with 4 blueberries. How many blueberries does Lydia use in all? Use the break apart and distribute strategy, and draw a number bond to solve.

Lydia uses \_\_\_\_\_ blueberries in all.

---

4. Steven solves  $7 \times 3$  using the break apart and distribute strategy. Show an example of what Steven's work might look like below.

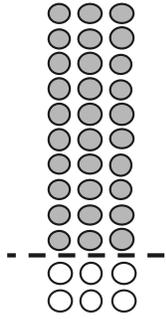
- 
5. There are 7 days in 1 week. How many days are there in 10 weeks?

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Label the array. Then, fill in the blanks to make true number sentences.

a.  $36 \div 3 =$  \_\_\_\_\_



$(30 \div 3) =$  \_\_\_\_\_

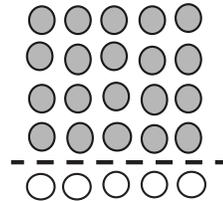
$(6 \div 3) =$  \_\_\_\_\_

$(36 \div 3) = (30 \div 3) + (6 \div 3)$

$= \frac{10}{\quad} + \frac{\quad}{\quad}$

$= \frac{12}{\quad}$

b.  $25 \div 5 =$  \_\_\_\_\_



$(20 \div 5) =$  4

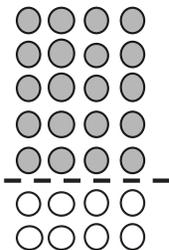
$(5 \div 5) =$  \_\_\_\_\_

$(25 \div 5) = (20 \div 5) + (5 \div 5)$

$= \frac{4}{\quad} + \frac{\quad}{\quad}$

$= \frac{\quad}{\quad}$

c.  $28 \div 4 =$  \_\_\_\_\_



$(20 \div 4) =$  \_\_\_\_\_

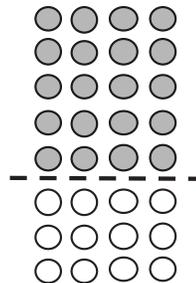
$(\quad \div 4) =$  \_\_\_\_\_

$(28 \div 4) = (20 \div 4) + (\quad \div 4)$

$= \frac{\quad}{\quad} + \frac{\quad}{\quad}$

$= \frac{\quad}{\quad}$

d.  $32 \div 4 =$  \_\_\_\_\_



$(\quad \div 4) =$  \_\_\_\_\_

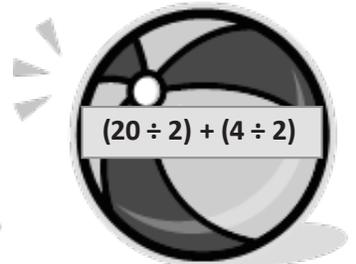
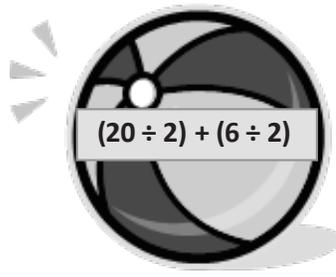
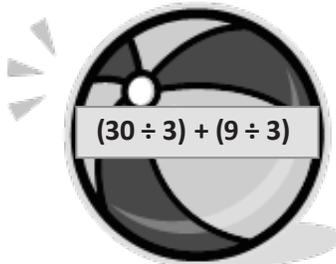
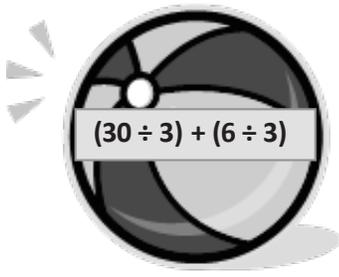
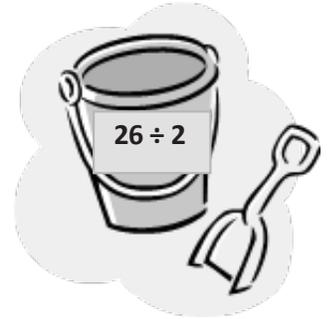
$(\quad \div 4) =$  \_\_\_\_\_

$(32 \div 4) = (\quad \div 4) + (\quad \div 4)$

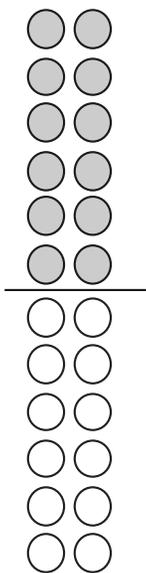
$= \frac{\quad}{\quad} + \frac{\quad}{\quad}$

$= \frac{\quad}{\quad}$

2. Match the equal expressions.



3. Nell draws the array below to find the answer to  $24 \div 2$ . Explain Nell's strategy.

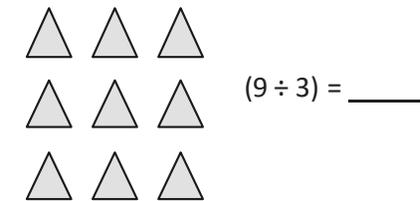
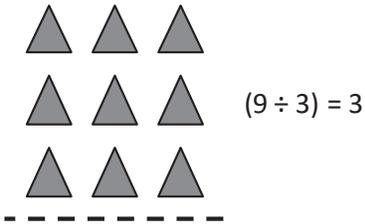


Name \_\_\_\_\_

Date \_\_\_\_\_

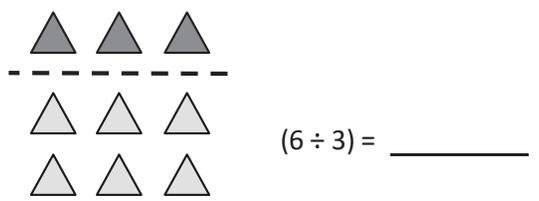
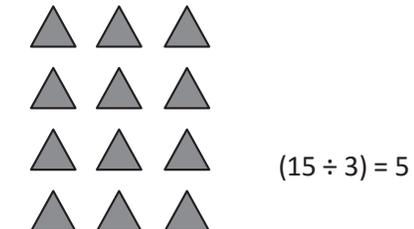
1. Label the array. Then, fill in the blanks to make true number sentences.

a.  $18 \div 3 = \underline{\quad}$



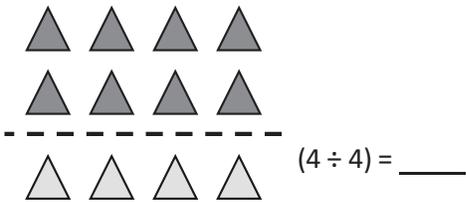
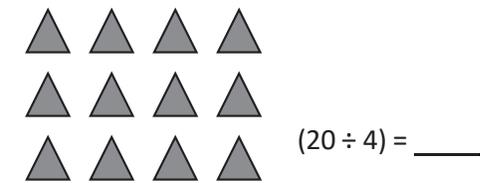
$$\begin{aligned} (18 \div 3) &= (9 \div 3) + (9 \div 3) \\ &= \underline{3} + \underline{\quad} \\ &= \underline{6} \end{aligned}$$

b.  $21 \div 3 = \underline{\quad}$



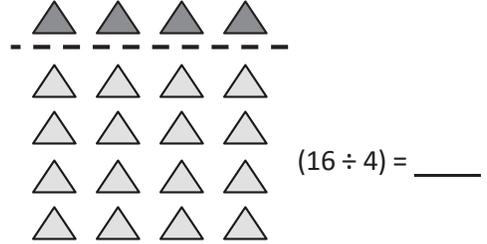
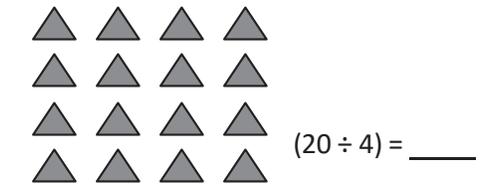
$$\begin{aligned} (21 \div 3) &= (15 \div 3) + (6 \div 3) \\ &= \underline{5} + \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

c.  $24 \div 4 = \underline{\quad}$



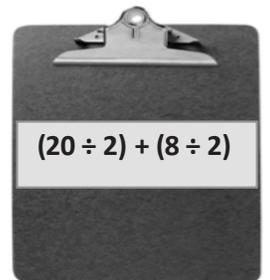
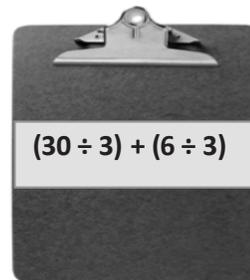
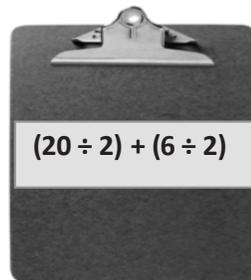
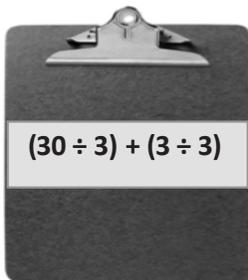
$$\begin{aligned} (24 \div 4) &= (20 \div 4) + (\underline{\quad} \div 4) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

d.  $36 \div 4 = \underline{\quad}$

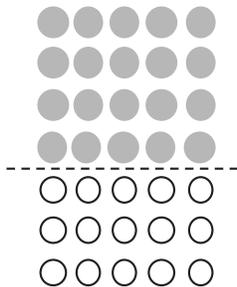


$$\begin{aligned} (36 \div 4) &= (\underline{\quad} \div 4) + (\underline{\quad} \div 4) \\ &= \underline{\quad} + \underline{\quad} \\ &= \underline{\quad} \end{aligned}$$

2. Match equal expressions.



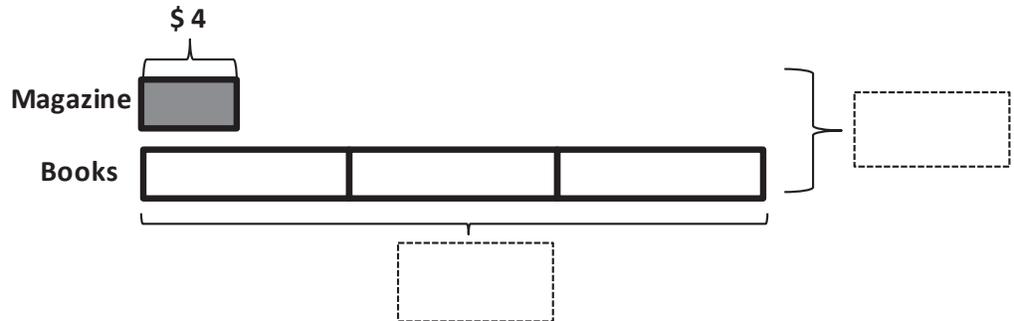
3. Alex draws the array below to find the answer to  $35 \div 5$ . Explain Alex's strategy.



Name \_\_\_\_\_

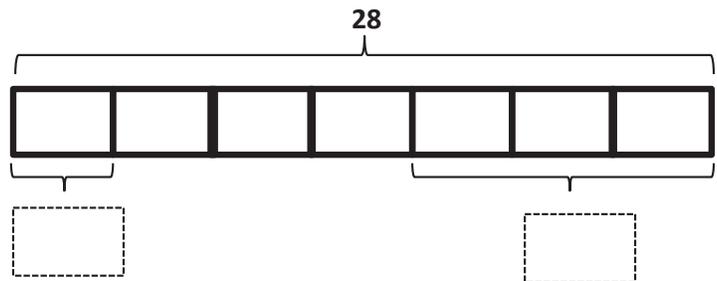
Date \_\_\_\_\_

1. Ted buys 3 books and a magazine at the book store. Each book costs \$8. A magazine costs \$4.



- a. What is the total cost of the books?
- b. How much does Ted spend altogether?

2. Seven children share 28 silly bands equally.



- a. How many silly bands does each child get?
- b. How many silly bands do 3 children get?

3. Eighteen cups are equally packed into 6 boxes. Two boxes of cups break. How many cups are unbroken?

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4. There are 25 blue balloons and 15 red balloons at a party. Five children are given an equal number of each color balloon. How many blue and red balloons does each child get?

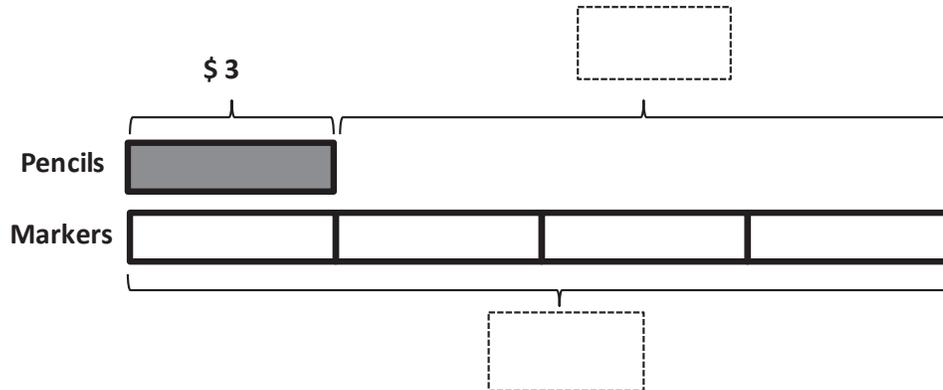
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5. Twenty-seven pears are packed in bags of 3. Five bags of pears are sold. How many bags of pears are left?

Name \_\_\_\_\_

Date \_\_\_\_\_

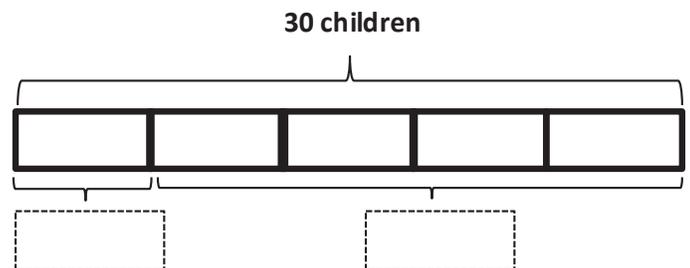
1. Jerry buys a pack of pencils that costs \$3. David buys 4 sets of markers. Each set of markers also costs \$3.



- a. What is the total cost of the markers?
- b. How much more does David spend on 4 sets of markers than Jerry spends on a pack of pencils?

2. Thirty students are eating lunch at 5 tables. Each table has the same number of students.

- a. How many students are sitting at each table?



- b. How many students are sitting at 4 tables?

3. The teacher has 12 green stickers and 15 purple stickers. Three students are given an equal number of each color sticker. How many green and purple stickers does each student get?

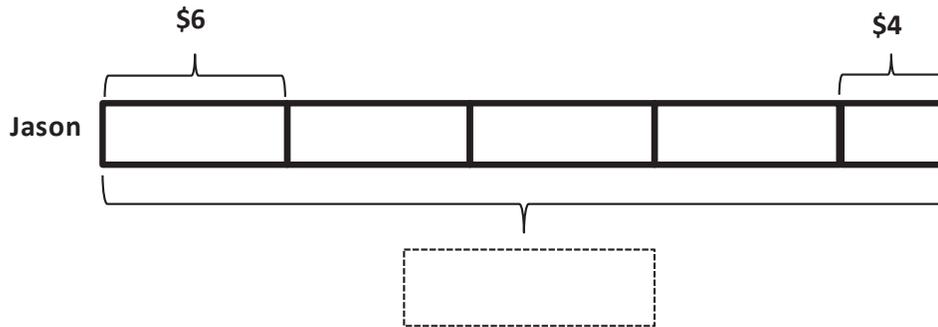
- 
4. Three friends go apple picking. They pick 13 apples on Saturday and 14 apples on Sunday. They share the apples equally. How many apples does each person get?

- 
5. The store has 28 notebooks in packs of 4. Three packs of notebooks are sold. How many packs of notebooks are left?

Name \_\_\_\_\_

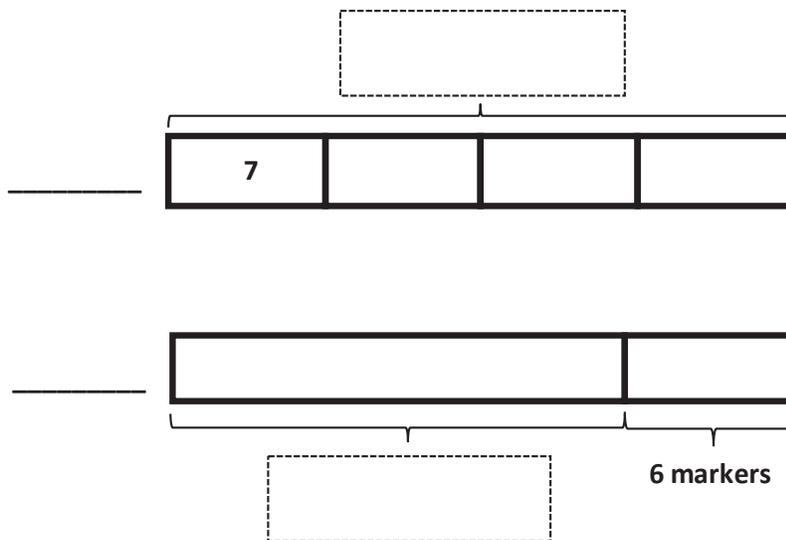
Date \_\_\_\_\_

1. Jason earns \$6 per week for doing all his chores. On the fifth week, he forgets to take out the trash, so he only earns \$4. Write and solve an equation to show how much Jason earns in 5 weeks.



Jason earns \_\_\_\_\_.

2. Miss Lianto orders 4 packs of 7 markers. After passing out 1 marker to each student in her class, she has 6 left. Label the tape diagram to find how many students are in Miss Lianto's class.



There are \_\_\_\_\_ students in Miss Lianto's class.

3. Orlando buys a box of 18 fruit snacks. Each box comes with an equal number of strawberry-, cherry-, and grape-flavored snacks. He eats all of the grape-flavored snacks. Draw and label a tape diagram to find how many fruit snacks he has left.

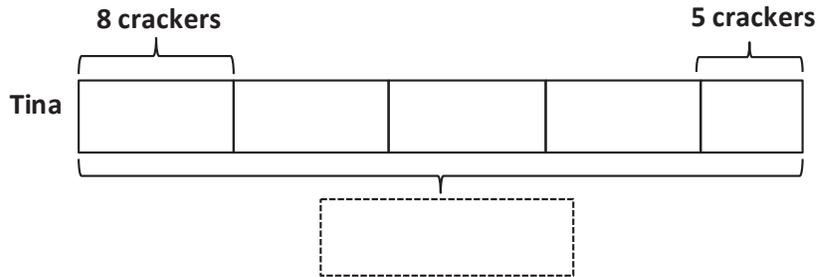
- 
4. Eudora buys 21 meters of ribbon. She cuts the ribbon so that each piece measures 3 meters in length.
- a. How many pieces of ribbon does she have?

- b. If Eudora needs a total of 12 pieces of the shorter ribbon, how many more pieces of the shorter ribbon does she need?

Name \_\_\_\_\_

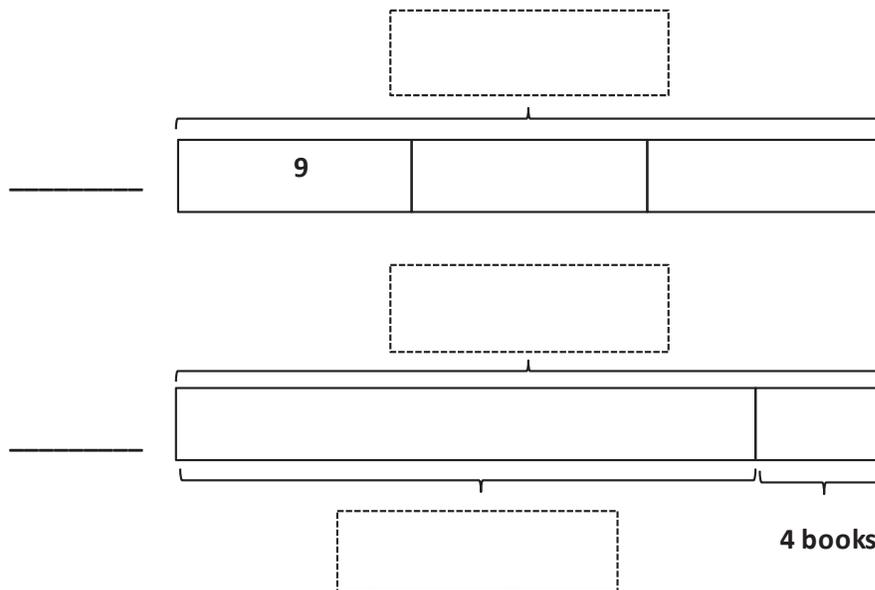
Date \_\_\_\_\_

1. Tina eats 8 crackers for a snack each day at school. On Friday, she drops 3 and only eats 5. Write and solve an equation to show the total number of crackers Tina eats during the week.



Tina eats \_\_\_\_\_ crackers.

2. Ballio has a reading goal. He checks 3 boxes of 9 books out from the library. After finishing them, he realizes that he beat his goal by 4 books! Label the tape diagrams to find Ballio's reading goal.



Ballio's goal is to read \_\_\_\_\_ books.

3. Mr. Nguyen plants 24 trees around the neighborhood pond. He plants equal numbers of maple, pine, spruce, and birch trees. He waters the spruce and birch trees before it gets dark. How many trees does Mr. Nguyen still need to water? Draw and label a tape diagram.

- 
4. Anna buys 24 seeds and plants 3 in each pot. She has 5 pots. How many more pots does Anna need to plant all of her seeds?