1. Fill in the blanks to make true statements.

   a. 3 groups of five = 15
      3 fives = 15
      3 x 5 = 15

   b. 3 + 3 + 3 + 3 + 3 = 15
      5 groups of three = 15
      5 x 3 = 15

   c. 6 + 6 + 6 + 6 = 24
      4 groups of six = 24
      4 x 6 = 24

   d. 4 + 4 + 4 + 4 + 4 + 4 = 24
      6 groups of 4 = 24
      6 x 4 = 24

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

   No, this picture does not show 2 x 3. There are 2 groups of apples, but they are not equal groups. It shows 1 group of 3 and 1 group of 2. You can also tell because there are 5 apples, not 6.

3. Draw a picture to show 2 x 3 = 6.

4. Caroline, Brian and Marta want to share a box of chocolates so that they each get the same amount. Circle the chocolates below to show 3 groups of 4. Then write addition and multiplication sentences to represent the problem.

   4 + 4 + 4 = 12
   3 x 4 = 12
5. The dots below show 2 groups of 5.

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

\[ \begin{array}{c}
  \cdot \cdot \\
  \cdot \cdot \\
  \cdot \cdot \\
  \cdot \cdot \\
  \cdot \cdot \\
\end{array} \]

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

They are the same because they have the same amount of circles—10 circles. They are different because the array is in rows and the other ones are just in whatever place. The array is easier to see.

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 sentence to describe the array.

\[ \begin{array}{c}
  \cdot \cdot \\
  \cdot \cdot \\
  \cdot \cdot \\
  \cdot \cdot \\
\end{array} \quad 4 \times 3 = 12 \\
\begin{array}{c}
  \cdot \\
  \cdot \\
\end{array} \quad \text{Emma has 12 rocks.}

7. Joshua helps his father organize cans of food in the cupboard. He makes an array with the cans and thinks, “My cans show 5 x 3!” Make a drawing that shows how many cans are in Joshua’s array.

\[ \begin{array}{c}
  \cdot \cdot \\
  \cdot \cdot \\
  \cdot \cdot \\
  \cdot \cdot \\
\end{array} \quad \text{the array} \]

\[ \begin{array}{c}
  \cdot \\
  \cdot \\
  \cdot \\
\end{array} \quad \text{Joshua has 15 cans in his array.} \]
Name: Gina  Date: 9/3

Solve numbers 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: 4  Size of each group: 5
   b) 4 x 5 = 20
   c) There are 20 flowers altogether.

2. There are 3 candies in each box. How many candies are in 6 boxes?
   a) Number of groups: 6  Size of each group: 3
   b) 6 x 3 = 18
   c) There are 18 candies altogether.

3. There are 4 oranges in each row. How many oranges are there in 3 rows?
   a) Number of rows: 3  Size of each row: 4
   b) 3 x 4 = 12
   c) There are 12 oranges altogether.

4. There are 2 loaves of bread in each row. How many loaves of bread are there in 5 rows?
   a) Number of rows: 5  Size of each row: 2
   b) 5 x 2 = 10
   c) There are 10 loaves of bread altogether.

5. a) Write a multiplication sentence for the array shown below.

   XXX
   XXX
   XXX
   4 x 3 = 12

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

   12
   3
   3
   3

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

   2
   2
   6
   or

   2
   2
   6

(continued on next page)
Name: Gina  Date: 9/4

1. Divide 14 flowers into 2 equal groups. There are ___ flowers in each group.
   There are 7 flowers in each group.

2. Divide 28 books into 4 equal groups. There are ___ books in each group.
   There are 7 books in each group.

3. Divide 30 apples into ___ equal groups. There are ___ apples in each group.
   There are 10 apples in each group.

4. Divide 12 cups into 2 equal groups. There are ___ cups in each group.
   There are 6 cups in each group.
   \[ 12 \div 2 = 6 \]

4. Charlie picked 20 apples. He divides them equally between 5 baskets. Draw the apples in each basket.
   There are ___ apples in each basket.
   \[ 20 \div 5 = 4 \]

5. 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.
   \[ 15 \div 5 = 3 \]
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. \(9 \div 3 = 3\)

   b. Draw a number bond to show Rachel's crackers.

   Rachel can make 3 bags with 9 crackers.

6. Jameisha has 16 wheels to make toy cars. She uses 4 wheels for 1 car.

   a. Use a count-by to find the number of cars Jameisha can build. Make a drawing to match your counting.

   \[4, 8, 12, 16\]

   b. Write a division sentence to represent the problem.

   \[16 \div 4 = 4\]

   Jameisha can make 4 toy cars with 16 wheels.
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 5 cans.

\[ 5 \times 3 = 15 \]
\[ 15 \div 3 = 5 \]

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

There are 3 tennis balls in each group.

\[ 5 \times 3 = 15 \]
\[ 15 \div 5 = 3 \]

3. Use an array to model problem 1.

\[ \frac{5 \times 3}{15 \div 3} = 5 \]

The number in the blanks represents:

the number of groups.

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

\[ 21 \div 7 = 3 \]
\[ 3 \times 7 = 21 \]

What is the meaning of the unknown factor and quotient? It represents the number of groups.

5. The teacher gives the problem \( 4 \times \_ = 12 \). Charlie finds the answer by writing and solving \( 12 \div 4 = 3 \).

Explain why Charlie’s method works.

Charlie’s method works because in both problems we have 4 groups of 3 and a total of 12. The quotient in a division problem is like finding an unknown factor in a multiplication problem.

6. The blanks in problem 5 represent the size of the groups. Draw an array to represent the number sentences.

\[ \]
1. a) Count by 2 six times.
   \[2, 4, 6, 8, 10, 12\]
   b) Draw an array that matches your count-by.
   c) Write a multiplication sentence that represents the total number of objects in your array.
   \[6 \times 2 = 12\]

2. a) Count by 5 two times.
   \[5, 10\]
   b) Draw an array that matches your count-by.
   c) Write a multiplication sentence that represents the total number of objects in your array.
   \[2 \times 6 = 12\]

3. a) Compare your work in problems 1 and 2. Turn your paper as you study the arrays to look at them in different ways.
   It's the same array! The array in problem 1 just gets turned on its side in problem 2.

b) Why are the factors in your multiplication sentences in a different order?
   Problem 1, you read as 6 groups of 2 in each group.
   Problem 2, you read as 2 groups of 6 in each group.
   So the problems are the same, but the numbers are arranged in a different order.

4. Count by the unit (the number in word form) the number of times indicated. Write the multiplication sentence that matches your count by. The first one is done for you.
   \[\text{a) } 6\text{ twos: } 6 \times 2 = 12\]
   \[\text{b) } 2\text{ sevens: } 2 \times 7 = 14\]
   \[\text{c) } 3\text{ sixes: } 3 \times 6 = 18\]
   \[\text{d) } 2\text{ sevens: } 2 \times 7 = 14\]
   \[\text{e) } 9\text{ twos: } 9 \times 2 = 18\]
   \[\text{f) } 2\text{ nines: } 2 \times 9 = 18\]
   \[\text{g) } 11\text{ twos: } 11 \times 2 = 22\]
   \[\text{h) } 2\text{ twelves: } 2 \times 12 = 24\]

5. Write and solve a different multiplication sentence to describe each array.
   \[4 \times 2 = 8\]
   \[2 \times 4 = 8\]

6. Ms. Nensal writes \[2 \times 7 = 7 \times 2\] on the board. Do you agree or disagree? Draw arrays to help explain your thinking.
   I agree. You can see the arrays I drew are the same. Array 2 just got put on its side. So you have to read the arrays a little differently because they are related. The number of dots are the same, and they are even organized the same. They are just rotated to look different. So \[2 \times 7 = 7 \times 2\].

7. Find the missing factor to make each number sentence true.
   \[3 \times 5 = \_ \times 5\]
   \[2 \times 8 = 8 \times \_\]
   \[2 \times 10 = 10 \times \_\]
   \[2 \times 9 = 9 \times \_\]

8. Jada gets 2 new packs of erasers. Each pack has 6 erasers in it.
   a) Draw an array to show how many erasers Jada has altogether.
   Pack 1
   Pack 2
   b) Write and solve a multiplication sentence to describe the array.
   \[2 \times 6 = 12\]
   c) Use the commutative property to write and solve a different multiplication sentence for the array.
   \[6 \times 2 = 12\]
6. Isaac picks 3 tangerines from his tree every day for 7 days.
   a. Use circles to draw an array that represents the tangerines Isaac picks.
   b. How many tangerines does Isaac pick in 7 days? Write and solve a multiplication sentence.
      \[ 7 \times 3 = 21 \quad \text{Isaac picks 21 tangerines in 7 days} \]
   c. 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.
   d. Write and solve a multiplication sentence to find the total number of tangerines Isaac picks.
      \[ 10 \times 3 = 30 \quad \text{He picks 30 tangerines altogether} \]

7. Sarah buys bottles of soap. Each bottle costs $2
   a. How much money does Sarah spend if she buys 3 bottles of soap?
      \[ 3 \times 2 = 6 \]
   b. How much money does she spend if she buys 6 bottles of soap?
      \[ 6 \times 2 = 12 \]
1. The team organizes soccer balls into 2 rows of 5. The coach adds 3 rows of 5 soccer balls. Complete the number sentences to describe the total array.

   a. \((5 + 5) + (5 + 5 + 5) = \) \(25\)
   b. \(2 \text{ fives} + \) \(3 \text{ fives} = \) \(5 \text{ fives}\)
   c. \(5 \times 5 = \) \(25\)

2. \(7 \times 2 = \) \(14\)

3. \(9 \times 2 = \) \(18\)

   a) Draw an array that represents Matthew's cards using an 'X' to show each card.

   b) Solve the multiplication sentence to find Matthew's total number of cards. \(4 \times 3 = \) \(12\)

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

   b) Add the totals from the multiplication facts in 4b and 5a to find Matthew's total cards.

   c) Write the multiplication sentence that shows Matthew's total number of cards.
1. \[7 \times 3 = (5 \times 3) + (2 \times 3) = 21\]

\[\{(5 \times 3) = 15\] 

\[\{(2 \times 3) = 6\] 

\[(5 \times 3) + (2 \times 3) = 15 + 6 = 21\]

2. \[8 \times 3 = (4 \times 3) + (4 \times 3) = 24\]

\[\{(4 \times 3) = 12\] 

\[(4 \times 3) = 12\]

\[(4 \times 3) + (4 \times 3) = 12 + 12\]

\[8 \times 3 = 24\]

3. Ruby is making a photo album. She puts 3 pictures in each row.

a) Use the multiplication sentences on the left. Draw arrays to show the photos on the upper and lower parts of Ruby's album page.

\[\begin{array}{c}
2 \times 3 = 6 \\
3 \times 3 = 9
\end{array}\]

b) Ruby calculates the total number of pictures as shown below. Use the array you drew to help explain her calculation.

\[\begin{array}{c}
5 \times 3 = 15 \\
5 \times 3 + 9 = 24
\end{array}\]

The whole array shows 5 rows times 3 columns. So 5 \times 3. Then maybe Ruby didn't know the answer to 5 \times 3 so she broke it into 2 smaller facts. 2 \times 3, which is 6, and 3 \times 3, which is 9. So she did 6 + 9. Because 5 \times 3 = 6 + 9. Then if you do 5 \times 3 it's 15. And 6 + 9 is 15. So 5 \times 3 = 6 + 9 = 15.
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.
      \[ \begin{array}{cccccccc}
      & & & & & & & \\
      & & & & & & & \\
      & & & & & & & \\
      & & & & & & & \\
      \end{array} \]
      \[\text{12 ÷ 2 = 6}\]
   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.
   \[ \begin{array}{cccccccc}
   \text{? plums} & & & & & & \\
   \text{18 plums} & & & & & & \\
   \text{6 bags} & & & & & & \\
   \end{array} \]
   \[\text{18 ÷ 6 = 3}\]
   There are \( 3 \) 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.
   \[ \begin{array}{cccccccc}
   \text{? baskets} & & & & & & \\
   \text{14 baskets} & & & & & & \\
   \text{7 piles} & & & & & & \\
   \end{array} \] \[\text{14 ÷ 7 = 2}\]
   There are 2 shopping 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.
   \[ \begin{array}{cccccccc}
   \text{? bell peppers} & & & & & & \\
   \text{24 bell peppers} & & & & & & \\
   \text{8 bags} & & & & & & \\
   \end{array} \] \[\text{24 ÷ 8 = 3}\]
   There are 3 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?
   \[ \text{1 week $2} \]
   \[ \text{\$16 ÷ \$2 = 8} \]
   It will take Olga 8 weeks to save up.
1. There are 8 birds at the pet store. 2 birds are in each cage. Circle to show how many cages there are.

\[ 8 \div 2 = 4 \]

There are 4 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.

\[ \frac{10}{5} = 2 \]

There are 2 fish in each bowl.

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

\[ 18 \div 2 = 9 \]

Sarah pays $9.

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 7 meters long.

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?

\[ 12 \div 2 = 6 \]

It will take 6 days to finish 1 box.

Lesson 12: 3+1
1. Complete the related expressions.

\[ \begin{align*}
1 \times 3 &= 3 \\
2 \times 3 &= 6 \\
3 \times 3 &= 9 \\
4 \times 3 &= 12 \\
5 \times 3 &= 15 \\
6 \times 3 &= 18 \\
7 \times 3 &= 21 \\
8 \times 3 &= 24 \\
9 \times 3 &= 27 \\
10 \times 3 &= 30 \\
\end{align*} \]

12. 3 + 3 = 6

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.

- 3 tomatoes
- 6 tomatoes
- 9 tomatoes
- 12 tomatoes

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

- 3 tomatoes
- 12 tomatoes

Mr. Lawton packs 4 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.

- 15 centimeters
- 3 centimeters
- 15 centimeters
- 5 stamps

Camille buys 5 stamps.

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

\[ \begin{align*}
? &= \text{kids} \\
1 &= \text{van} \\
30 &= \text{total students} \\
30 \div 3 &= 10 \\
10 &= \text{students in each van} \\
\end{align*} \]

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

\[ \begin{align*}
? &= \text{friends} \\
3 &= \text{per person} \\
24 &= \text{total spent} \\
24 \div 3 &= 8 \\
8 &= \text{friends buy frozen yogurt} \\
\end{align*} \]
1. Skip count by fours. Then match the answers to the appropriate multiplication problem.

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.

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

a) 

\[
\begin{array}{c}
4 \\
\hline
\end{array}
\]

\[2 \times 4 = 8\]

\[
\begin{array}{c}
2 \\
\hline
\end{array}
\]

\[4 \times 2 = 8\]

b) 

\[
\begin{array}{c}
3 \\
\hline
\end{array}
\]

\[3 \times 4 = 12\]

\[
\begin{array}{c}
4 \\
\hline
\end{array}
\]

\[4 \times 3 = 12\]

c) 

\[
\begin{array}{c}
7 \\
\hline
\end{array}
\]

\[7 \times 4 = 28\]

\[
\begin{array}{c}
4 \\
\hline
\end{array}
\]

\[4 \times 7 = 28\]

2. Draw and label 2 tape diagrams to model how 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? 

\[4 \times 8 = 32\]

There are 32 petals on Grace's 4 flowers.

There are 32 chair legs altogether.
1. Label the array. Then fill in the blanks below to make the statements true.

   a) \( 6 \times 4 = \phantom{24} \)
   \[
   \begin{array}{c}
   6 \\
   6 \\
   6 \\
   6 \\
   \hline
   \end{array}
   \]
   \( (5 \times 4) = \phantom{20} \)
   \( (1 \times 4) = \phantom{4} \)
   \[
   \begin{array}{c}
   5 \\
   5 \\
   5 \\
   5 \\
   \hline
   \end{array}
   \]
   \( (1 \times 4) = \phantom{4} \)
   \[
   \begin{array}{c}
   1 \\
   1 \\
   1 \\
   1 \\
   \hline
   \end{array}
   \]
   \[
   \frac{(6 \times 4) - (5 \times 4) + (1 \times 4)}{20 + 4} = \phantom{24}
   \]
   \[
   \frac{(7 \times 4) - (5 \times 4) + (2 \times 4)}{20 + 8} = \phantom{28}
   \]

   b) \( 7 \times 4 = \phantom{20} \)
   \[
   \begin{array}{c}
   7 \\
   7 \\
   7 \\
   7 \\
   \hline
   \end{array}
   \]
   \( (5 \times 4) = \phantom{20} \)
   \( (2 \times 4) = \phantom{4} \)
   \[
   \begin{array}{c}
   5 \\
   5 \\
   5 \\
   5 \\
   \hline
   \end{array}
   \]
   \( (2 \times 4) = \phantom{4} \)
   \[
   \begin{array}{c}
   2 \\
   2 \\
   2 \\
   2 \\
   \hline
   \end{array}
   \]
   \[
   \frac{(7 \times 4) - (5 \times 4) + (2 \times 4)}{20 + 8} = \phantom{28}
   \]

   c) \( 8 \times 4 = 32 \)
   \[
   \begin{array}{c}
   8 \\
   8 \\
   8 \\
   8 \\
   \hline
   \end{array}
   \]
   \( (5 \times 4) = \phantom{20} \)
   \( (3 \times 4) = \phantom{12} \)
   \[
   \begin{array}{c}
   5 \\
   5 \\
   5 \\
   5 \\
   \hline
   \end{array}
   \]
   \( (3 \times 4) = \phantom{12} \)
   \[
   \begin{array}{c}
   3 \\
   3 \\
   3 \\
   3 \\
   \hline
   \end{array}
   \]
   \[
   \frac{(8 \times 4) - (5 \times 4) + (3 \times 4)}{20 + 12} = \phantom{32}
   \]

   d) \( 9 \times 4 = 36 \)
   \[
   \begin{array}{c}
   9 \\
   9 \\
   9 \\
   9 \\
   \hline
   \end{array}
   \]
   \( (5 \times 4) = \phantom{20} \)
   \( (4 \times 4) = \phantom{16} \)
   \[
   \begin{array}{c}
   5 \\
   5 \\
   5 \\
   5 \\
   \hline
   \end{array}
   \]
   \( (4 \times 4) = \phantom{16} \)
   \[
   \begin{array}{c}
   4 \\
   4 \\
   4 \\
   4 \\
   \hline
   \end{array}
   \]
   \[
   \frac{(9 \times 4) - (5 \times 4) + (4 \times 4)}{20 + 16} = \phantom{36}
   \]

2. Match the equal expressions.

   - \( (5 \times 4) + (3 \times 4) \)
   - \( (5 \times 4) + (4 \times 4) \)
   - \( (5 \times 4) + (2 \times 4) \)

3. Nolan draws the array below to find the answer to the multiplication fact \( 4 \times 10 \). He says, "\( 4 \times 10 \) is just double \( 4 \times 5 \)". Explain Nolan's strategy.

   - \( 4 \times 5 = 20 \) and \( 20 + 20 = 40 \).
   - If I know \( 4 \times 5 = 20 \) then I can double the answer and I will know \( 4 \times 10 = 40 \) because 10 is the double of 5.
1. Use the array to complete the related number sentences.

   \[1 \times 4 = 4\]  \[4 + 4 = 8\]  \[3 \times 4 = 12\]  \[12 + 4 = 16\]

   \[2 \times 4 = 8\]  \[8 + 4 = 12\]

   \[3 \times 4 = 12\]  \[12 + 4 = 16\]

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.

   \[\frac{36}{4} = 9\]

   He packs 9 boxes of muffins.

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

   \[\frac{32}{4} = 8\]

   There are 8 glasses in each row.

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

   \[\frac{28}{4} = 7\]

   \[4 \times 7 = 28\]

   2 notebooks cost $14.
5. There are 7 teams in the soccer tournament. 10 children play on each team. How many children are playing in the tournament?

\[ 7 \times 10 = ? \]
\[ (5 \times 10) + (2 \times 10) = 7 \times 10 \]
\[ 50 + 20 = 70 \]
\[ 7 \times 10 = 70 \]

There are 70 children playing in the tournament.

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

\[ \triangle \text{3 sides} \]
\[ (4 \times 3) + (4 \times 3) = 8 \times 3 \]
\[ 12 + 12 = 24 \]
\[ 8 \times 3 = 24 \]

There are 24 sides altogether.

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?

\[ 12 \times 10 = ? \]
\[ (10 \times 10) + (2 \times 10) = 12 \times 10 \]
\[ 100 + 20 = 120 \]
\[ 12 \times 10 = 120 \]

There are 120 bottles in the vending machine.
Name: Gina  
Date: 9/19  

1. Label the array. Then fill in the blanks below to make statements that are true.

2. Match the equal expressions.

3. Nell draws the array below to find the answer to the division fact 24 ÷ 2. Explain Nell's strategy.

   Nell breaks apart 24 in 6 twos and 6 twos. 6 twos = 12. So she does 12 ÷ 2 for both parts and adds the answers to get 24 ÷ 2.

   \[ (12 ÷ 2) = 6 \]
   \[ 6 + 6 = 12 \]
   \[ 24 ÷ 2 = 12 \]
Name: Gina  Date: 9/20


- Magazine $4
- Books $8 $8 $8

Total: $28

- What is the total cost of the books?
  
  $3 \times 8 = 24$

- How much does Ted spend altogether?
  
  $24 + 4 = 28$

  Ted spends $28 altogether.

2. Seven children share 28 silly bands equally.

- How many silly bands does each child get?
  
  $28 \div 7 = 4$

- How many silly bands do 3 children get?
  
  $3 \times 4 = 12$

  3 children get 12 silly bands.

3. Eighteen cups are equally packed into 6 boxes. 2 boxes of cups break. How many cups are unbroken?

- 18 cups
- 2 boxes break

  $18 \div 6 = 3$

  12 cups are unbroken.

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?

- Blue balloons
  
  $25 \div 5 = 5$

  Each child gets 5 blue balloons.

- Red balloons
  
  $15 \div 5 = 3$

  Each child gets 3 red balloons.

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

- 27 pears
- 5 bags sold

  $27 \div 3 = 9$

  There are 9 bags of pears.
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.

<table>
<thead>
<tr>
<th>Jason</th>
<th>$6</th>
<th>$4</th>
</tr>
</thead>
</table>

- $6 \times 4 = 24$
- $24 + 4 = 28$

Jason earns $28$

2. Miss Llanto 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 Llanto’s class.

<table>
<thead>
<tr>
<th>Markers</th>
<th>7</th>
<th>7</th>
<th>7</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>?</td>
<td>students</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- $4 \times 7 = 28$
- $28 - 6 = 22$

There are 22 students in Miss Llanto’s class.

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

Flavors: Strawberry, Cherry, Grape

- $18 \div 3 = 6$
- $18 - 6 = 12$

There are 12 fruit snacks left.

4. Eudora buys 21 m of ribbon. She cuts the ribbon so that each piece measures 3 m in length.

- How many pieces of ribbon does she cut?
- If Eudora needs a total of 12 pieces of ribbon, how many more pieces of ribbon does she need?

- $21 \div 3 = 7$ pieces
- $12 - 7 = 5$ pieces

Eudora needs 5 pieces of ribbon.