1. Complete the related expressions.

\[
\begin{align*}
2 \times 3 &= 6 \\
6 \div 3 &= \_2\_ \\
1 \times 3 &= \_3\_ \\
3 \div 3 &= \_1\_ \\
7 \times 3 &= \_2\_1\_ \\
21 \div 3 &= 7 \\
9 \times 3 &= \_2\_7\_ \\
27 \div 3 &= 9
\end{align*}
\]

2. Ms. Jones' 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.

\[
\begin{align*}
fish & \quad \_3\_ \\
3 \text{ tanks} & \quad \_9\_ \\
15 \text{ fish} & \quad \_1\_5\_ \\
\end{align*}
\]

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

Ms. Jones has \_5\_ 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?

\[
\begin{array}{cccccc}
3 & 6 & 9 & 12 & 15 & 18 \\
\hline
\end{array}
\]

\[18 \div 3 = 6\]

Juan cuts 6 pieces of wire.

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

\[
\begin{array}{ccc}
? & & \\
\hline
24 & \text{pencils} & \text{for 1 student}
\end{array}
\]

\[24 \div 3 = 8\]

Each student will get 8 pencils.

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

\[27 \div 3 = 9\]

There are 9 groups of third graders.
1. Skip-count by fours. Match the answers to the appropriate multiplication problem.

4 8 12 16 20 24 28 32 36 40

9 × 4
7 × 4
6 × 4
8 × 4
10 × 4
5 × 4
1 × 4
2 × 4
4 × 4
3 × 4
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.

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

\[
5 \times 4 = 20
\]

There are 20 juice boxes in total.

2. 6 folders are placed on each table. How many folders are there on 4 tables? Draw and label a tape diagram to solve.

\[
\begin{array}{c}
6 \\
12 \\
18 \\
24 \\
\end{array}
\]

\[
6 \times 4 = 24
\]

There are 24 folders on 4 tables.

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

\[
\begin{array}{c}
4 \\
8 \\
12 \\
16 \\
20 \\
24 \\
28 \\
32 \\
\end{array}
\]

\[
4 \times 8 = 32
\]

There are 32 corners on 8 squares.
1. Label the tape diagrams and complete the equations. Then draw an array to represent the problems.

a.

\[4 \times 3 = 12\]

\[3 \times 4 = 12\]

b.

\[4 \times 9 = 36\]

\[9 \times 4 = 36\]
2. 7 clowns hold 4 balloons each at the fair. Draw and label a tape diagram to show the total number of balloons the clowns hold.

4 Balloons

7 Clowns

28 Balloons

The clowns hold 28 balloons at the fair.

3. George swims 7 laps in the pool each day. How many laps does George swim after 4 days? Draw and label a tape diagram to solve.

7 Laps

4 days

? Laps

George swims 28 laps after 4 days.
1. Label the array. Then fill in the blanks below to make the statements true.

a. $6 \times 4 = 24$

\[
\begin{array}{c}
\text{(5 \times 4)} = 20 \\
\text{(1 \times 4)} = 4 \\
\text{= 20 + 4} \\
\text{= 24}
\end{array}
\]

b. $8 \times 4 = 32$

\[
\begin{array}{c}
\text{(5 \times 4)} = 20 \\
\text{(3 \times 4)} = 12 \\
\text{(8 \times 4)} = (5 \times 4) + (3 \times 4) \\
\text{= 20 + 12} \\
\text{= 32}
\end{array}
\]
2. Match the multiplication facts with their answers.

- $4 \times 6 = 24$
- $4 \times 7 = 28$
- $4 \times 8 = 32$
- $4 \times 9 = 36$

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

$5 \times 4 = 20$ and $4 \times 4 = 16$. I took 9 in $4 \times 9$ and split it into numbers I could multiply easily. 5 and 4 equal $5 \times 4$ is easy to multiply, Then I added both sums to get 36, So $4 \times 9$ is 36.
1. Use the array to complete the related number sentences.

\[ 1 \times 4 = 4 \quad 4 \div 4 = 1 \]

\[ 2 \times 4 = 8 \quad 8 \div 4 = 2 \]

\[ 3 \times 4 = 12 \quad 12 \div 4 = 3 \]

\[ 4 \times 4 = 16 \quad 16 \div 4 = 4 \]

\[ 5 \times 4 = 20 \quad 20 \div 4 = 5 \]

\[ 6 \times 4 = 24 \quad 24 \div 4 = 6 \]

\[ 7 \times 4 = 28 \quad 28 \div 4 = 7 \]

\[ 8 \times 4 = 32 \quad 32 \div 4 = 8 \]

\[ 9 \times 4 = 36 \quad 36 \div 4 = 9 \]

\[ 10 \times 4 = 40 \quad 40 \div 4 = 10 \]
2. The teacher puts 32 students into groups of 4. How many groups does she make? Draw and label a tape diagram to solve.

\[ 32 \div 4 = 8 \]

32 students

She makes 8 groups.

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

\[ 24 \div 4 = 6 \]

There are 6 toothbrushes in each row.

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

\[ 40 \div 4 = 10 \]

\[ 10 + 2 = 12 \] brushes

Each student will get 12 paint brushes.
1. Match.

- 7 tens
- 8 fours
- 9 tens
- 7 threes
- 5 tens
- 3 fours
- 6 tens
- 2 threes

- $(5 \times 3) + (2 \times 3) = 21$
- $(5 \times 10) + (2 \times 10) = 70$
- $(6 \times 10) - (3 \times 10) = 90$

2. $9 \times 4 = 36$

$9 \times 4 = (5 \times 4) + (4 \times 4) = 20 + 16 = 36$

$9 \times 4 = 36$
3. Lydia makes 10 pancakes. She tops each pancake with 4 blueberries. How many blueberries does Lydia use in all?

\[
\begin{align*}
5 \times 4 & \quad 5 \times 4 \\
10 \times 4 & = 40
\end{align*}
\]

\[\text{or} \quad 20 + 20 = 40 \quad 10 \times 4 = 40\]

Lydia uses 40 blueberries.

4. Steven solves \(7 \times 3\) using the distributive property. Show an example of what Steven's work might look like below.

\[
\begin{align*}
5 \times 3 & \quad 2 \times 3 \\
7 \times 3 & = 21
\end{align*}
\]

\[15 + 6 = 21 \quad 7 \times 3 = 21\]

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

\[
\begin{align*}
7 \times 10 & = 70 \\
\text{There are 70 days in 10 weeks.} & \\
\text{or} & \\
50 + 20 & = 70
\end{align*}
\]
1. Label the array. Then complete the equations to make statements that are true.

a. \(18 \div 3 = \underline{6}\)

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

\((9 \div 3) = 3\)

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

\((9 \div 3) = \underline{3}\)

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

\[
(18 \div 3) = (9 \div 3) + (9 \div 3)
\]

\[
= \underline{3} + \underline{3}
\]

\[
= \underline{6}
\]

b. \(21 \div 3 = \underline{7}\)

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

\((15 \div 3) = 5\)

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

\((6 \div 3) = \underline{2}\)

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

\[
(21 \div 3) = (15 \div 3) + (6 \div 3)
\]

\[
= \underline{5} + \underline{2}
\]

\[
= \underline{7}
\]

c. \(24 \div 4 = \underline{6}\)

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

\((20 \div 4) = \underline{5}\)

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

\((4 \div 4) = \underline{1}\)

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

\[
(24 \div 4) = (20 \div 4) + (4 \div 4)
\]

\[
= \underline{5} + \underline{1}
\]

\[
= \underline{6}
\]

d. \(36 \div 4 = \underline{9}\)

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

\((20 \div 4) = \underline{5}\)

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

\((16 \div 4) = \underline{4}\)

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

\[
(36 \div 4) = (20 \div 4) + (16 \div 4)
\]

\[
= \underline{5} + \underline{4}
\]

\[
= \underline{9}
\]
4. Match equal expressions.

- $28 \div 2$
- $33 \div 3$
- $36 \div 3$
- $26 \div 2$
- $(30 \div 3) + (3 \div 3)$
- $(20 \div 2) + (6 \div 2)$
- $(30 \div 3) + (6 \div 3)$
- $(20 \div 2) + (8 \div 2)$

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

```
4 Rows

3 Rows

O O O O O O
O O O O O O
O O O O O O
```

Alex breaks apart 35 into 4 fives and 3 fives. Alex probably knows skip counting by fives. So $20 \div 5 = 4$ and $15 \div 5 = 3$; if you add 4 + 3 it will equal 7. The answer to $35 \div 5$ is 7.

   Pencils
   $3

   Markers
   $3 \times 4 = 12$

   a. What is the total cost of the markers?
   
   The total cost of markers is $12.

   b. How much more does David spend on 4 sets of markers than Jerry spends on a pack of pencils?
   
   David spends $9 more on markers than Jerry spends on pencils. $12 - $3 = $9$

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

   30 children

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

   b. How many students are sitting at 4 tables?
   
   24 students are sitting at 4 tables. $4 \times 6 = 24$
3. The teacher has 12 green stickers and 15 purple stickers. Three super star students are given an equal number of each color sticker. How many green and purple stickers does each student get?

Each student gets 4 green stickers and 5 purple stickers.

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?

Each person will get 9 apples. \(27 \div 3 = 9\)

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

4 packs of notebooks are left. \(28 \div 4 = 7\)