EUREKA MATH™

GRADE 3

Homework Helpers Sampler

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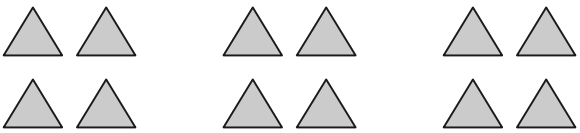
G3-M1-Lesson 1

1. Solve each number sentence.



I know this picture shows equal groups because each group has the same number of triangles. There are 3 equal groups of 4 triangles.

3 groups of $4 = \mathbf{12}$

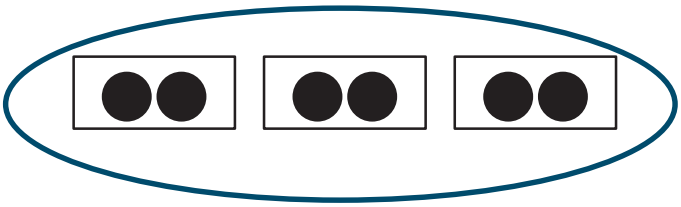
3 fours $= \mathbf{12}$

$4 + 4 + 4 = \mathbf{12}$

$3 \times 4 = \mathbf{12}$

I can multiply to find the total number of triangles because multiplication is the same as repeated addition! 3 groups of 4 is the same as 3×4. There are 12 total triangles, so $3 \times 4 = 12$.

2. Circle the picture that shows 3×2.

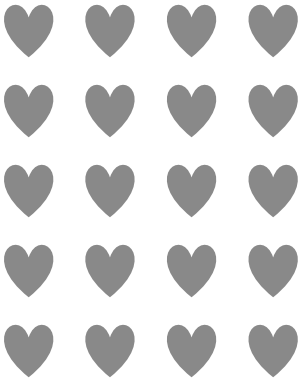


This picture shows 3×2 because it has 3 groups of 2. The groups are equal.

This picture does *not* show 3×2 because the groups are not equal. Two of the groups contain 2 objects, but the other only has 1 object.

G3-M1-Lesson 2

1. Use the array below to answer the questions.



The hearts are arranged in an array, and I know that a row in an array goes straight across. There are 5 rows in this array. Each row has 4 hearts.

a. What is the number of rows? **5**

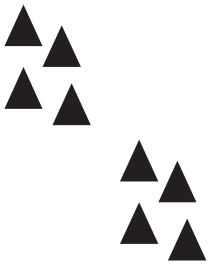
b. What is the number of objects in each row? **4**

c. Write a multiplication expression to describe the array. **5×4**

I know a multiplication expression is different from an equation because it doesn't have an equal sign.

I can write the expression 5×4 because there are 5 rows with 4 hearts in each row.

2. The triangles below show 2 groups of four.



a. Redraw the triangles as an array that shows 2 rows of four.

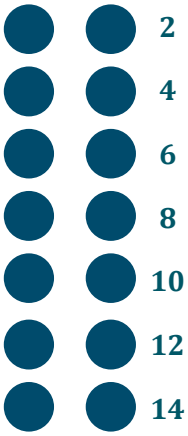
I can redraw the equal groups as an array. I can draw 2 rows with 4 triangles in each row.

I need to make sure to explain how they are the same *and* how they are different!

b. Compare the groups of triangles to your array. How are they the same? How are they different?

They are the same because they both have the same number of triangles, 8. They are different because the triangles in the array are in rows, but the other triangles are not in rows.

3. Kimberly arranges her 14 markers as an array. Draw an array that Kimberly might make. Then, write a multiplication equation to describe your array.



$7 \times 2 = 14$

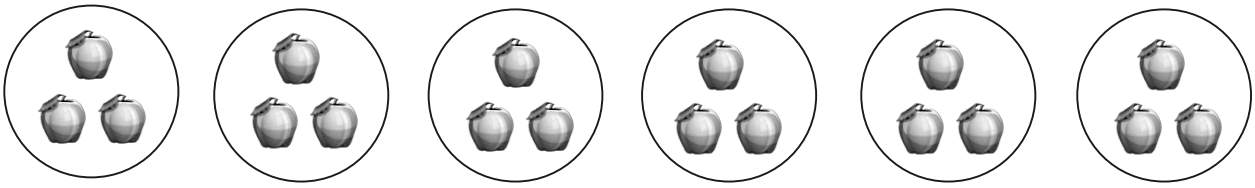
I can write the equation by writing the number of rows (groups), 7, times the number in each group, 2. The product (total) is 14.

This problem doesn't tell me the number of rows or the number of objects in each row. I need to use the total, 14, to make an array. Since 14 is an even number, I am going to make rows of 2. I can skip count by 2 and stop when I get to 14.

I think there are other arrays that would work for a total of 14. I can't wait to see what my friends came up with!

G3-M1-Lesson 3

1. There are 3 apples in each basket. How many apples are there in 6 baskets?



a. Number of groups: 6 Size of each group: 3

b. 6 × 3 = 18

c. There are 18 apples altogether.

Each circle represents 1 basket of apples. There are 6 circles with 3 apples in each circle. The number of groups is 6, and the size of each group is 3. There are 18 apples altogether. I can show this with the equation $6 \times 3 = 18$.

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

a. Number of rows: 4 Size of each row: 3

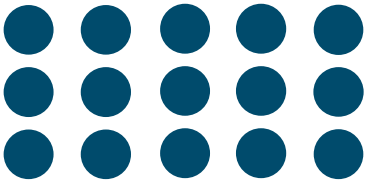
b. 4 × 3 = 12

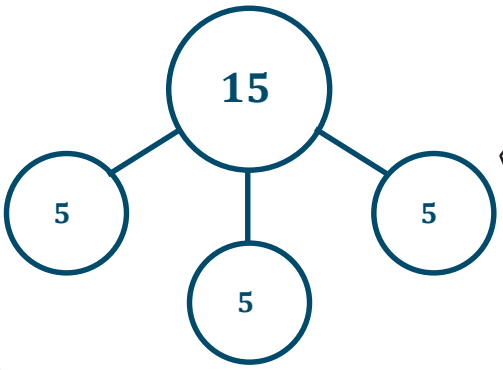
c. There are 12 bananas altogether.

I can show this with the equation $4 \times 3 = 12$. The 4 in the equation is the number of rows, and 3 is the size of each row.

The factors tell me the number of groups and the size of each group. I can draw an array with 3 rows and 5 in each row.

3. Draw an array using factors 3 and 5. Then, show a number bond where each part represents the amount in one row.





My array shows 3 rows of 5. I could have used the same factors, 3 and 5, to draw an array with 5 rows of 3. Then my number bond would have 5 parts, and each part would have a value of 3.

A number bond shows a part–whole relationship. I can draw a number bond with a total of 15 because there are 15 dots in my array.
I can draw 3 parts for my number bond because there are 3 rows in my array.
I can label each part in my number bond as 5 because the size of each row is 5.