Division: The Size of the Group   Guided Notes   **Math 3**

What is a size of a group?

In division, we look for factors by **separating a total into equal groups of the same number of items in each group**. Recalling the equal groups strategy, we can remember that a product can be solved visually by having equal groups of a certain number of items. This certain number of items in each group is called the size of the group. The size of the group is a factor of the total. Therefore, we can find the size of the group by dividing the total with a certain number of groups.

That means that **the total is separated by how many groups there are**. The items in each group are the size of the group, which is called the **quotient**.

We can read a division equation **A ÷ B = C** as **A separated into B groups to get the size, which is C**.

For example, **15 ÷ 3** can be read as **15 separated into 3 groups.** The quotient will be **5** because separating 15 into 3 groups will have 5 items in each group.

Division: The Size of the Group   Guided Notes   **Math 3**

For example:

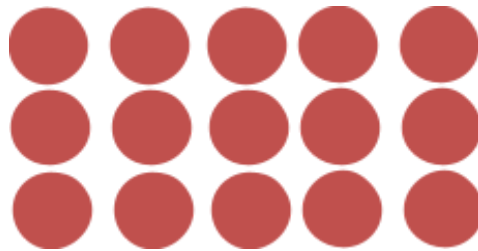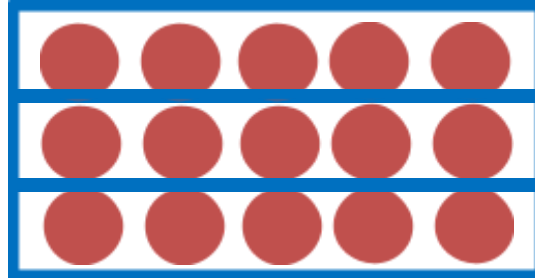**15** $\div$ **3**

Total   **Number of groups**

15   **separated into 3 groups**

First, draw 15 same-sized objects:

Then, separate the objects equally into 3 groups:

Count all the dots separated in each group:

There are **5** dots in the each group.

So, the size of the group is **5**.

Division: The Size of the Group   Guided Notes   **Math 3**

Separate the dots into 7 groups

What is the size of each group? **2**

Separate the dots into 5 groups

What is the size of each group? **4**

Time to think

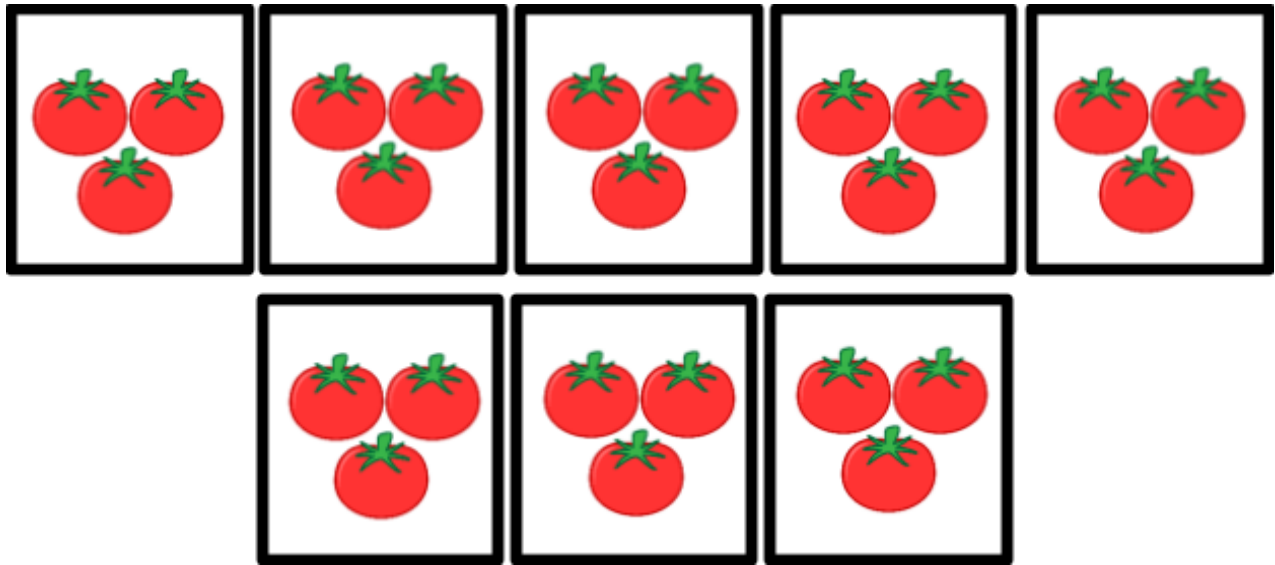1. How would you write 27 separated into 9 groups as an expression?

   $27 \div 9$

2. How would you write 15 separated into 5 groups with a size of 3 as an equation?

   $15 \div 5 = 3$

Division: The Size of the Group

There are 24 tomatoes separated into 8 groups.

What is the size of each group? 3

$$24 \div 8 = 3$$
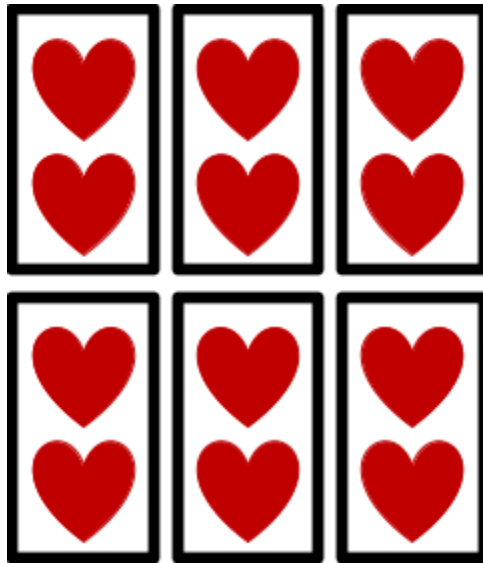

There are 42 stars separated into 7 groups.

What is the size of each group? 6

$$42 \div 7 = 6$$
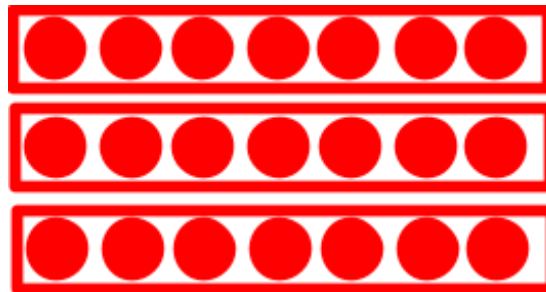
Division: The Size of the Group   Guided Notes   **Math 3**

There are 12 hearts separated into 6 groups.

What is the size of each group? 2

$$12 \div 6 = 2$$
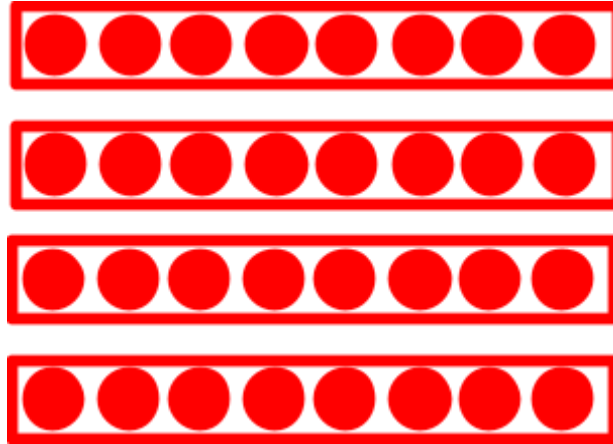
How would you draw 21 ÷ 3 into the same sized groups?

21 is separated into 3 groups.

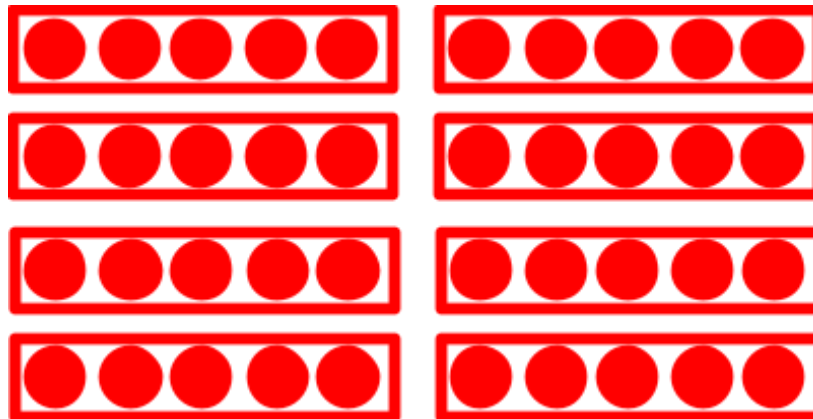Each group has a size of 7.

Division: The Size of the Group   Guided Notes   **Math 3**

How would you draw 32 ÷ 4 into the same sized groups?

32 is separated into 4 groups.

Each group has a size of 8.

How would you draw 40 ÷ 8 into the same sized groups?

40 is separated into 8 groups.

Each group has a size of 5.

Division: The Size of the Group Guided Notes **Math 3**

Time to think

1. If you add the size of the group by how many groups you separated it, what will you get?
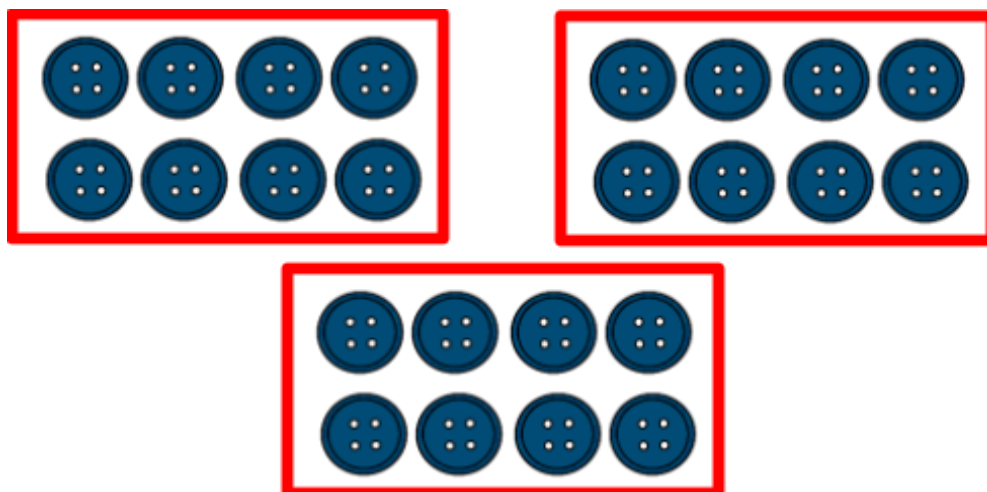
   You will get the total.

2. Should the size of each group be equal to each other? Why?

   Yes because if the size of each group is not equal to each other, the total is not separated into equal groups.

Bryan has 24 buttons. He wants to separate them into 3 bags. What is the size of each bag?
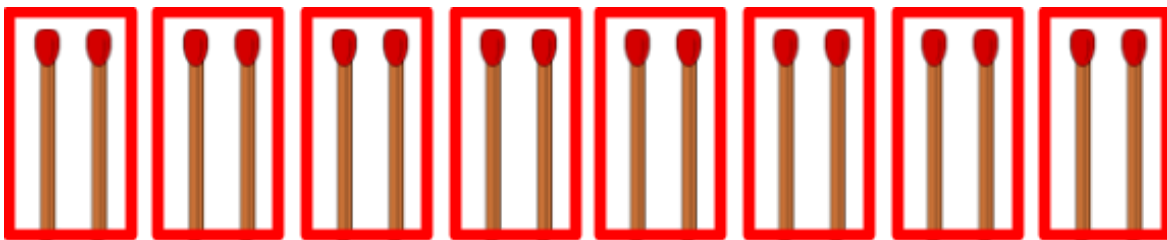
Draw 24 buttons separated into 3 bags.

The size of each bag has 8 buttons.

Division: The Size of the Group

Guided Notes **Math 3**

Time to Think

Using what we learned about the size of the group, answer these word problems:

1. Loren separates 16 matchsticks into 8 boxes. How many matchsticks are there in each box?

16 separated into 8 groups mean 16 ÷ 8.

The size is **2 matchsticks**.

2. Gary has 36 marbles. He separates them into 9 containers. What is the size of each group?

36 separated into 9 groups mean 36 ÷ 9.

The size is **4 marbles**.