Monday 30th November

Unit 5
Multiplication and division 1

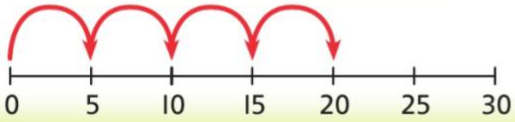
In this unit we will ...
- Decide if groups are equal
- Form multiplication sentences
- Use arrays
- Practise the 2, 5 and 10 times-tables
- Solve multiplication word problems

We will need some maths words and signs. Which of these have you seen before?

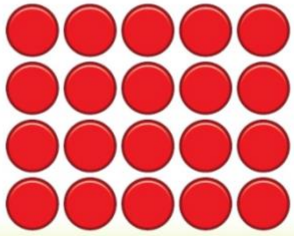
equal groups **multiplication (×)**

times-tables **times**

We use these a lot, don't we? You can use a number line for multiplication as well. Can you find 4 × 5 using the number line?

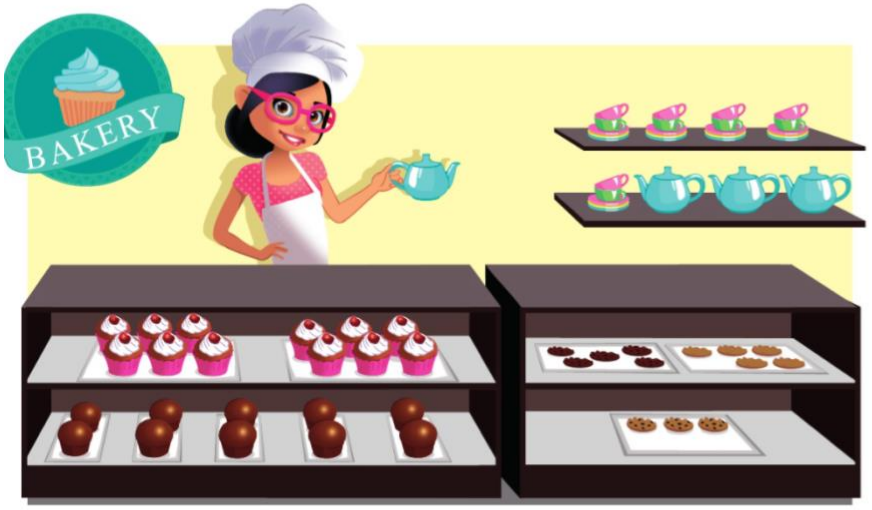


We can use an array to help us when we multiply. Can you use 20 counters to make this array? Can you move the counters to make a different array?



Making equal groups

Discover



1 **a)** Are the  in equal groups?

Are the  in equal groups?

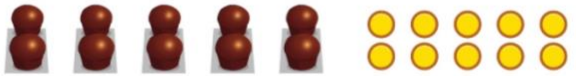
b) Are the  in equal groups? How do you know?

Share

a)

There are 2 equal groups of  .

Each group contains 6  .

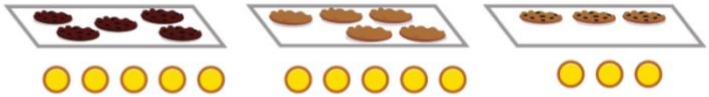


There are 5 equal groups of  .

Each group contains 2  .

Each tray is an equal group. Equal groups means there is the same number in each group.

b)



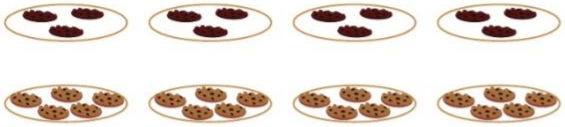
The  are not in equal groups.

There are 5  in 2 of the groups and 3 in another group.

These are different groups.

Think together

1



Copy and complete each sentence.

There are 4 groups of ☐  .

There are 4 groups of ☐  .

2

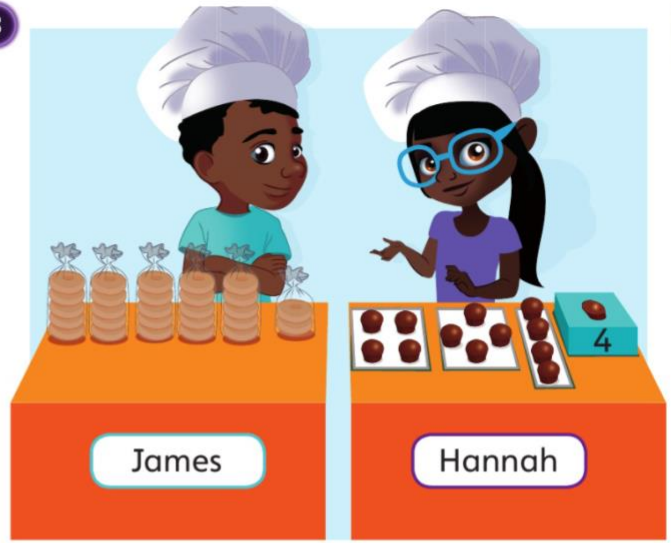
Copy and complete each sentence.

There are ☐ equal groups of 3  .

There are ☐ equal groups of ☐  .

There are ☐ equal groups of ☐  .

3



Who has equal groups?

_____ has equal groups.

Some of the groups don't look the same. I wonder if they still have the same number in them.

Tuesday 1st December

Multiplication as equal groups

Discover

1 **a)** 5 chairs fit around each  .

How can you work out the total number of chairs for 3  ?

b) 2 chairs fit around each  .

How can you work out the total number of chairs for 6  ?

Share

I could add all 3 groups to find the total number of chairs.

a)

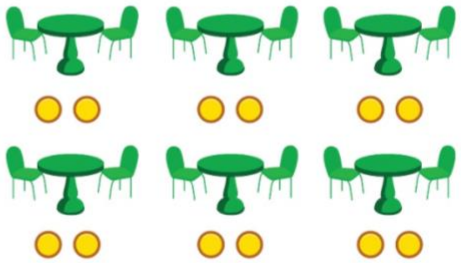
There are 3 groups of 5 chairs.

To work out the total, we can write this as 5 + 5 + 5.

This is the same as 3 × 5.

I can do 3 × 5 to get the total. 3 × 5 means that there are 3 groups of 5.

b)



There are 6 groups of 2 chairs.

2 + 2 + 2 + 2 + 2 + 2

6 × 2

Think together

1 4 chairs fit around each  .

How many chairs fit around 3  ?

3 groups of 4 chairs

□ + □ + □

3 × □

2

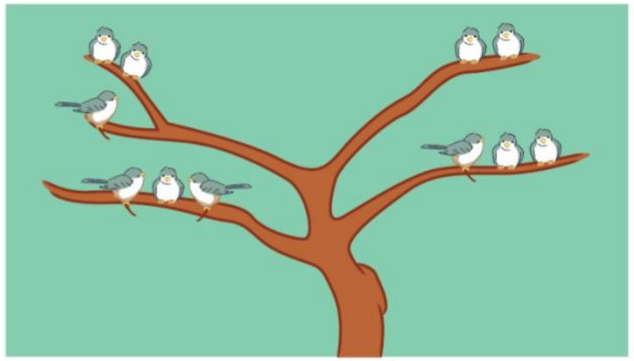
How many chairs fit around the tables?

Write as an addition and a **multiplication**.

□ + □ + □ + □

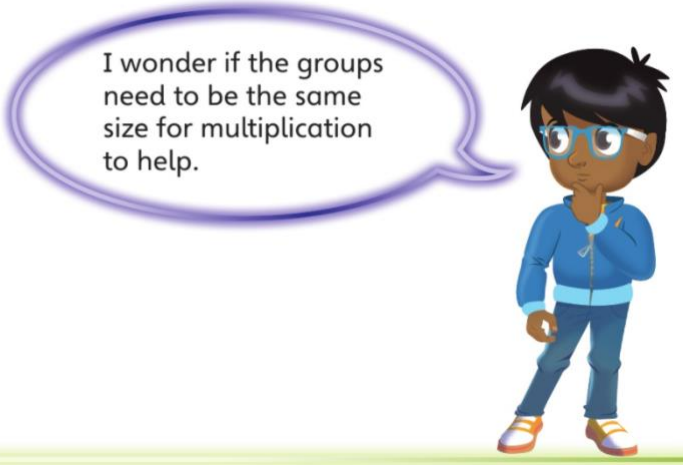
□ × □

3



Henry wrote 4 × 3 to find out how many birds there are.

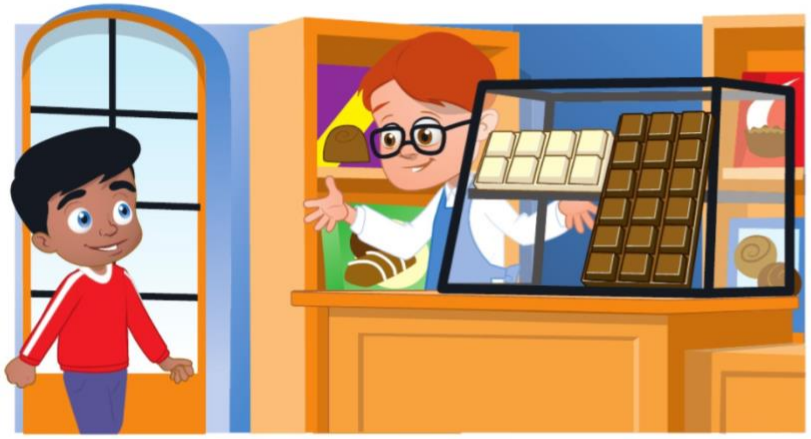
Is he correct? Explain.



Wednesday 2nd December

Adding equal groups

Discover



1 a) How many pieces of white chocolate are there?

b) How many pieces of dark chocolate are there?

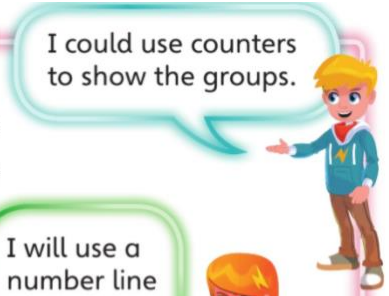
Share

a)

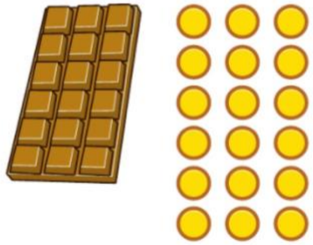
$4 + 4 = 8$

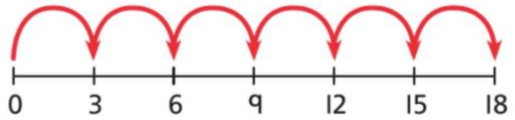
$2 \times 4 = 8$

There are 8 pieces of white chocolate.



b)

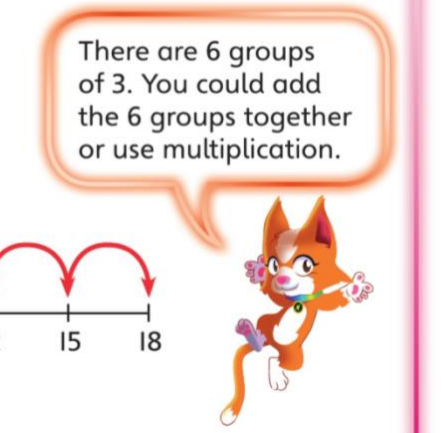




$3 + 3 + 3 + 3 + 3 + 3 = 18$

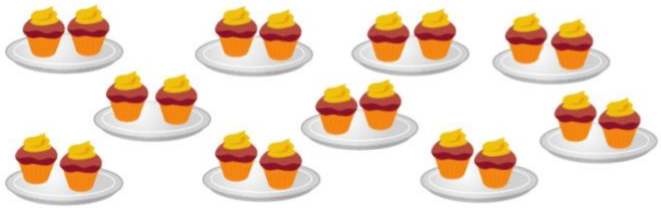
$6 \times 3 = 18$

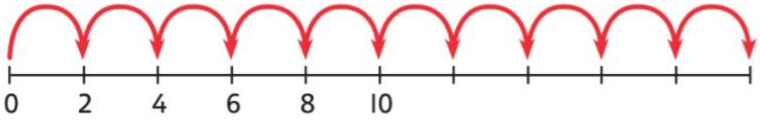
There are 18 pieces of dark chocolate.



Think together

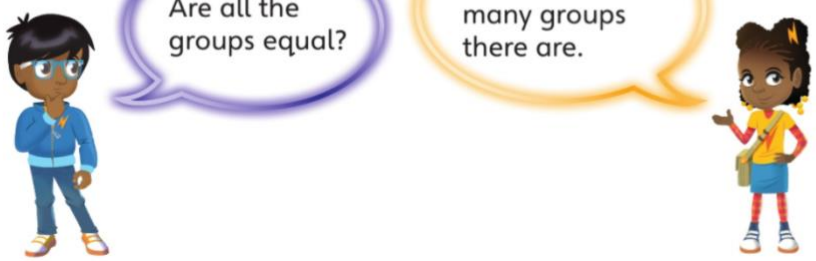
1 How many muffins are there?



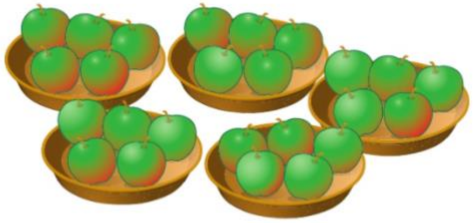


2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = ☐

10 × 2 = ☐



2 How many apples are there in total?



5 + 5 + 5 + 5 + 5 = ☐

5 × 5 = ☐

What does each 5 represent?

3 I had 5 baskets of 5 apples. I now have one more basket of 5 apples. How many apples are there now?

☐ + ☐ + ☐ + ☐ + ☐ + ☐ = ☐

☐ × ☐ = ☐

Thursday 3rd December

Multiplication sentences

Discover

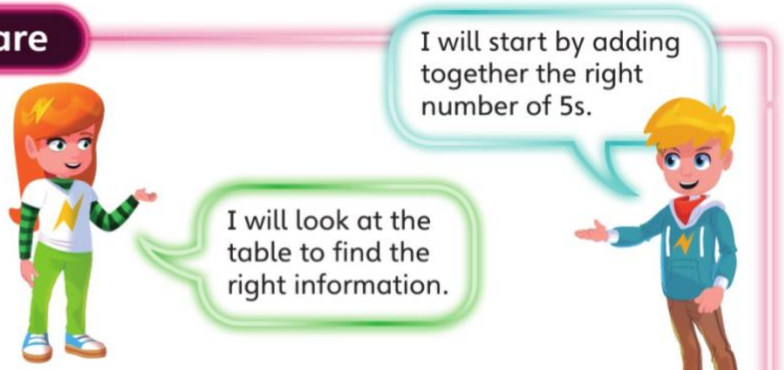
1 **a)** How much has been collected in 5p coins?

b) Danny writes 3 × 2.

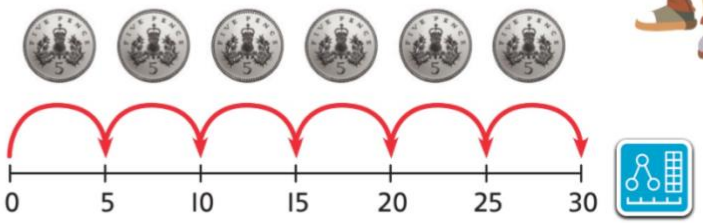
What row of the table does this calculation represent?

What do the 3 and the 2 represent?

Share



a)



5 + 5 + 5 + 5 + 5 + 5 = 30

6 × 5 = 30

30p has been collected.

b) There are 2 kinds of coin with a 2: and .

3 × 2 means 3 groups of 2. The first row of the table represents 3 x 2, because there are 3 .

The 3 is the number of coins. The 2 represents the .

Think together

1

Some friends bought 5 and 3 .

How much did they spend on each?

They spent £ ☐ on .

☐ × £ ☐ = £ ☐.

They spent £ ☐ on .

☐ × £ ☐ = £ ☐.

2 Use counters to show these multiplication sentences.

The first one has been done for you.

3 × 2

4 × 3

5 × 5

3

CHALLENGE

Look at the picture. Tell a story of 4 × 2.

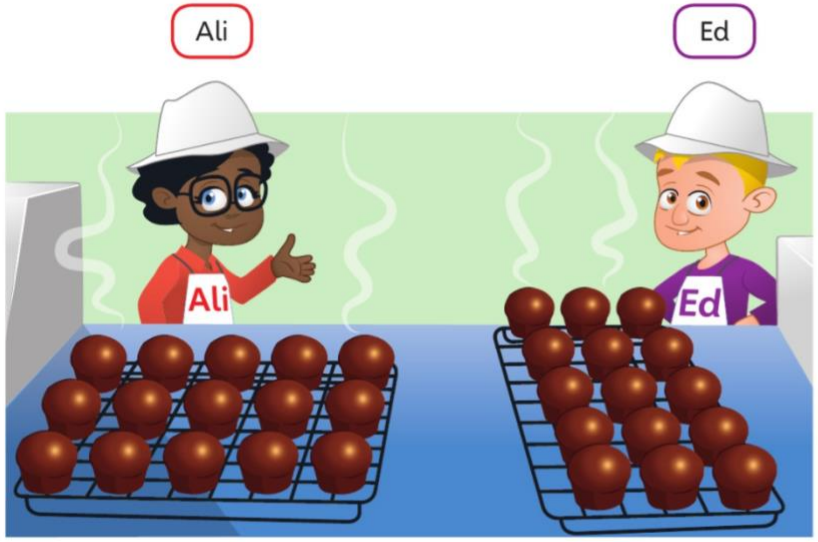
Can you think of another story to tell?

First, I will think about what things I can see in 2s.

Friday 4th December

Using arrays

Discover



1 a) How many cupcakes did Ali bake in total?

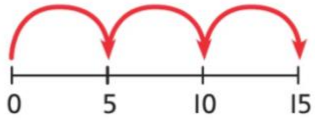
How did you work out the answer?

b) How many cupcakes did Ed bake in total?

Did he bake more than Ali?

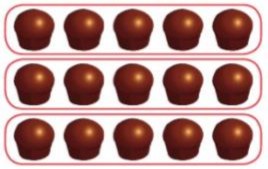
Share

a)

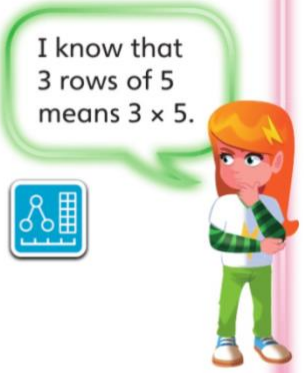


5 + 5 + 5 = 15

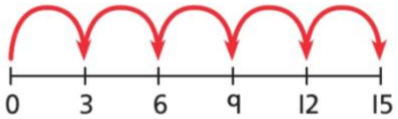
3 × 5 = 15



Ali baked 15 cupcakes in total.



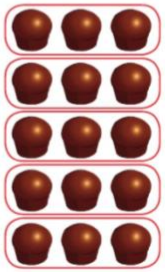
b)



3 + 3 + 3 + 3 + 3 = 15

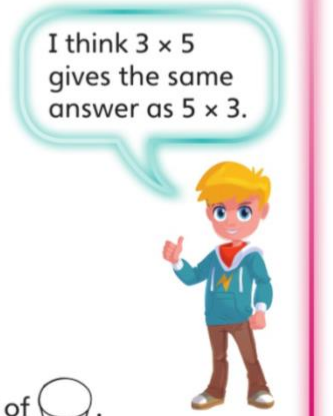
5 × 3 = 15

3 × 5 = 15



Ed baked 15 cupcakes in total.

Ed and Ali baked the same number of cupcakes.

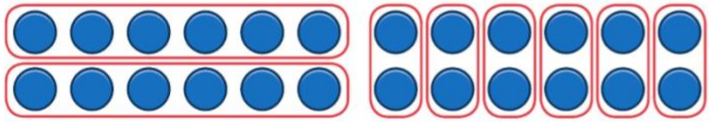


Think together

1 **a)** Here are some counters in a 6 × 2 array.

How many counters are there?

Show how to work it out in two ways.



□ + □ = □ □ + □ + □ + □ + □ + □ = □

□ × □ = □ □ × □ = □

b) The cakes are ordered in a 10 × 5 array.

How many cakes are there?

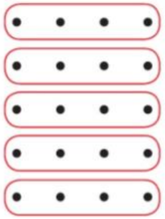
Show two ways of working it out.

□ × □ = □

□ × □ = □

When objects are arranged in rows and columns like this, they are called arrays. You can find the total by adding the amount in the rows or the columns.

2 Complete the number sentences to find the total number of dots.



4 + 4 + 4 + 4 + 4 = 20

□ × □ = □

5 + 5 + 5 + 5 = □

□ × □ = □

3 Show a 5 × 2 array in two different ways.

Show the groups in rows.

Show the groups in columns.

How many different additions and multiplications can you find?

CHALLENGE

I wonder how many different calculations I can make!