



Maths Week 1

Multiplication

Arrays

2 and 5 times tables



Lesson 1 - Multiplication

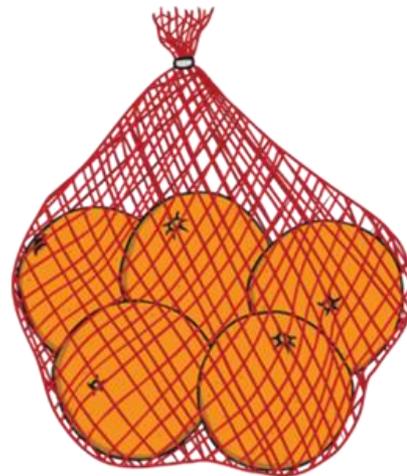
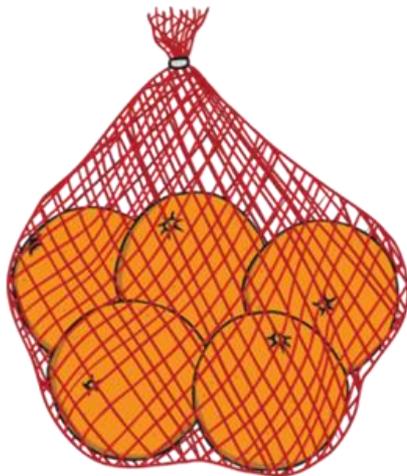
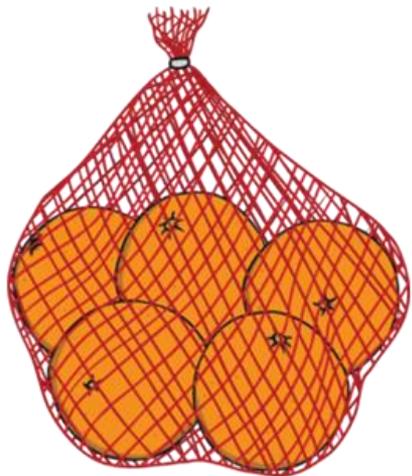
In this lesson we will look at equal groups, repeated addition, and then multiplication. The end goal being to use the multiplication symbol confidently.

Looking at in this order lets us see the multiplication visually, before breaking it down into repeated addition and then finally changing that to a multiplication calculation.

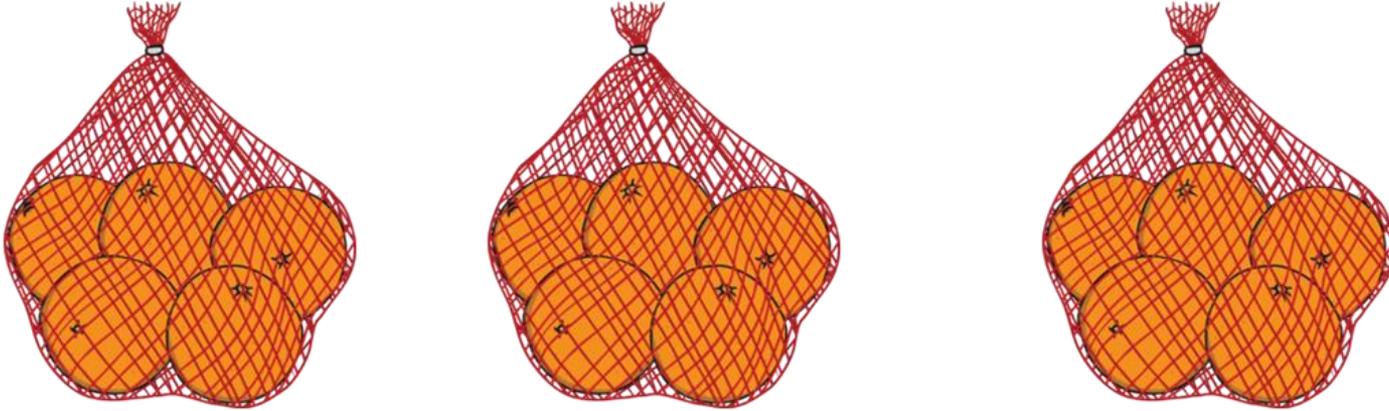
Like last half term, there will be a video to watch and then optional sheets to complete at the end of each lesson.

<https://vimeo.com/418150502>

What can you see?
(Think mathematically)

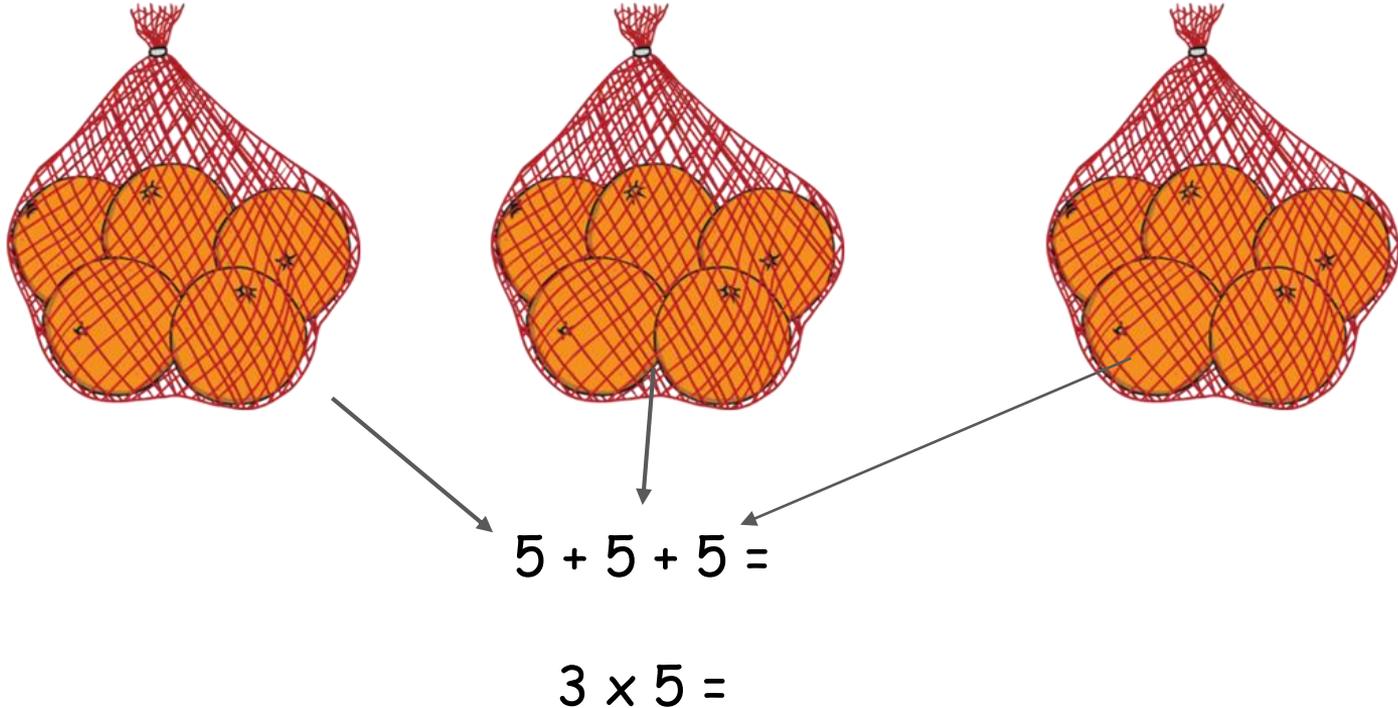


There are 3 bags of oranges.
Each bag has 5 oranges in.



We would write this as:
There are 3 equal groups with 5 in each group.

To work out the total amount of oranges we can start off with repeated addition and then turn that into a multiplication calculation after.



Your turn! Follow the steps to solve this one.

Complete the sentences.

a)



There are equal groups with
in each group.

$$\square + \square + \square = 18$$

$$\square \times \square = 18$$

See if you can write these repeated addition calculations as multiplication sentences.

$$4 + 4 + 4 =$$

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

$$10 + 10 =$$

If the total is 20, what could the addition and multiplication be?

Top tip:
Remember that we have been looking at equal groups.
The addition will be the same number repeated, from there you can solve the multiplication.

Can you find another solution?

We can also use the bar model for multiplication.

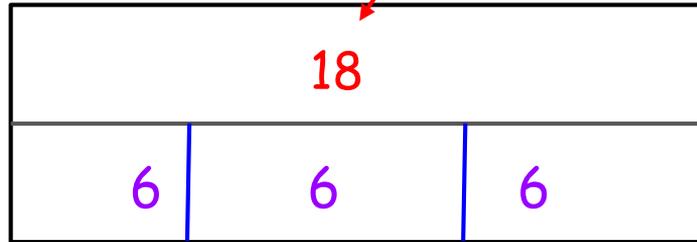
For example:

$$3 \times 5 = 15$$

15		
5	5	5

The bar model can then help us solve missing number problems.

$$3 \times \underline{\quad} = 18$$



18 (the total) goes at the top of the bar model as it is the **whole**.

The bar model is split into three parts as we know it is 3 equal groups.

So then we can think about it as 18 split equally between 3 people: $18 \div 3$

$$18 \div 3 = 6$$

★ Challenge ★

Try these, you can use counters or the bar model, or your own clever method!

a) $3 \times \square = 12$

b) $\square \times 4 = 8$

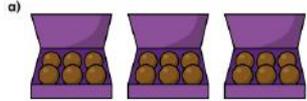
c) $2 \times \square = 10$

Some of you might want to try the activity sheet now. It's a great way to practice what you've learnt today!

Multiplication sentences using the \times symbol

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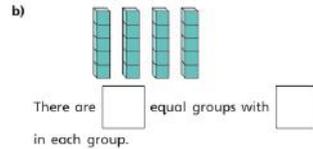
1 Complete the sentences.



There are equal groups with in each group.

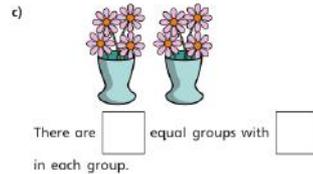
$$\square + \square + \square = 18$$

$$\square \times \square = 18$$



$$\square + \square + \square + \square = 20$$

$$\square \times \square = 20$$



$$\square + \square = 8$$

$$\square \times \square = 8$$

Lesson 2 - Arrays

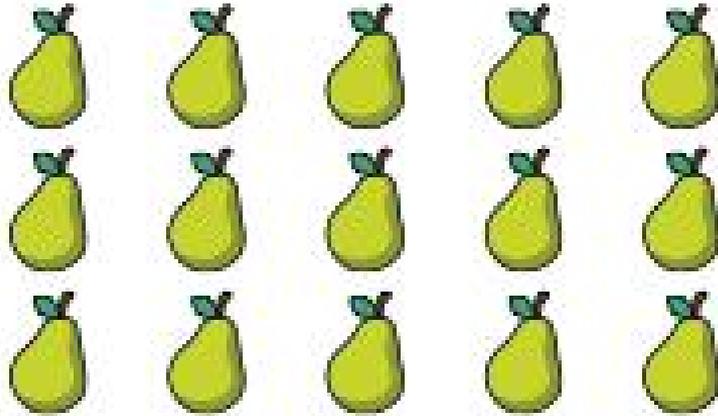
Today we are going to look at arrays.

Arrays are a really good way to visualise a multiplication problem.

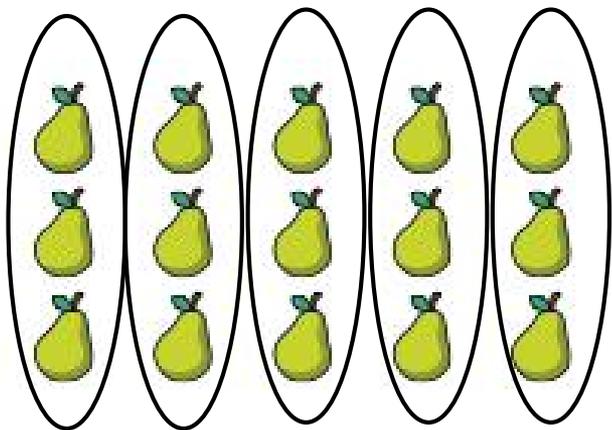
Like the last lesson, there will be a video to watch and then optional sheets to complete at the end of each lesson.

<https://vimeo.com/417922235>

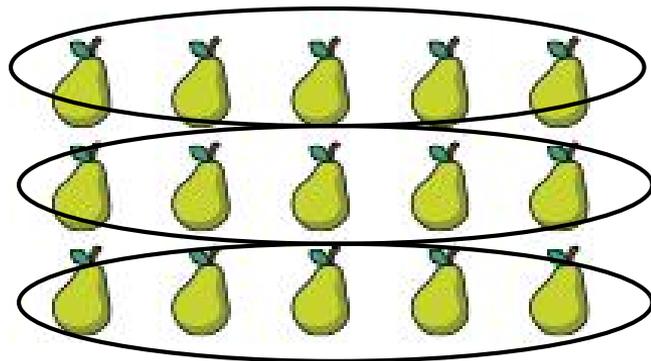
What can you see here?



Think about our equal groups from the last lesson.



or



There are ___ equal groups with
___ in each group.

$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} =$$

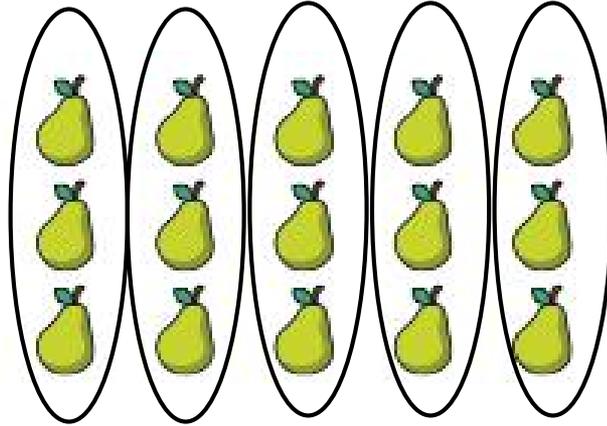
$$\underline{\quad} \times \underline{\quad} =$$

There are ___ equal groups with
___ in each group.

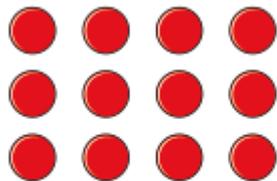
$$\underline{\quad} + \underline{\quad} + \underline{\quad} =$$

$$\underline{\quad} \times \underline{\quad} =$$

We call these arrays



Write two additions and two multiplications for the array.



$$\square + \square + \square = \square$$

$$\square \times \square = \square$$

$$\square + \square + \square + \square = \square$$

$$\square \times \square = \square$$

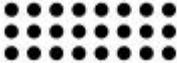
What do you notice?

Using objects around your house can you create an array to show 3×6 ?

Once you've done that you can draw the array out and then work out the total.

$$3 \times 6 = \underline{\quad}$$

Can you complete the table to show the multiplication calculations in 2 different arrays?

Multiplication	Array 1	Array 2
3×8		
2×5		
4×9		
6×1		

Some of you might want to try the activity sheet now. It's a great way to practice what you've learnt today!

Use arrays

1 How many pears are there?



+ + =

× =

There are pears.

2 How many stars are there?



+ =

× =

There are stars.

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- 3** Write two additions and two multiplications for the array.



+ + =

× =

+ + + =

× =

What do you notice?

- 4** Write two multiplications for this array.



× =

× =

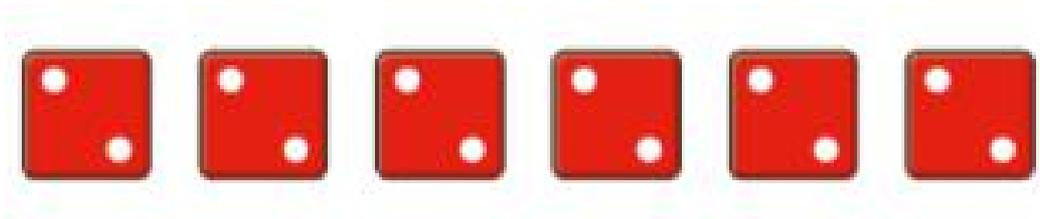
Lesson 3 - 2 times table

Today we are going to look at the 2 times table.

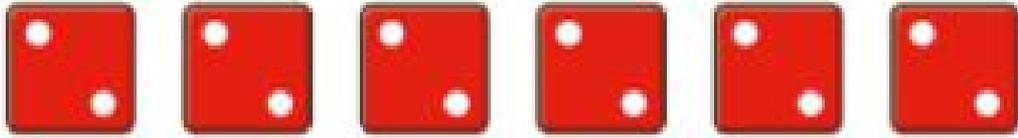
Like the last lesson, there will be a video to watch and then optional sheets to complete at the end of each lesson.

<https://vimeo.com/417922431>

What can you see?
(Think mathematically)

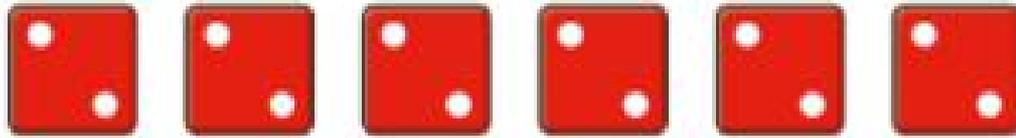


There are 6 dice.
Each die has 2 dots on it.



We would write this as:
There are 6 equal groups with 2 in each group.

To work out the total amount of dots we can start off with repeated addition and then turn that into a multiplication calculation after.
Top Tip: remember you can count in 2's!



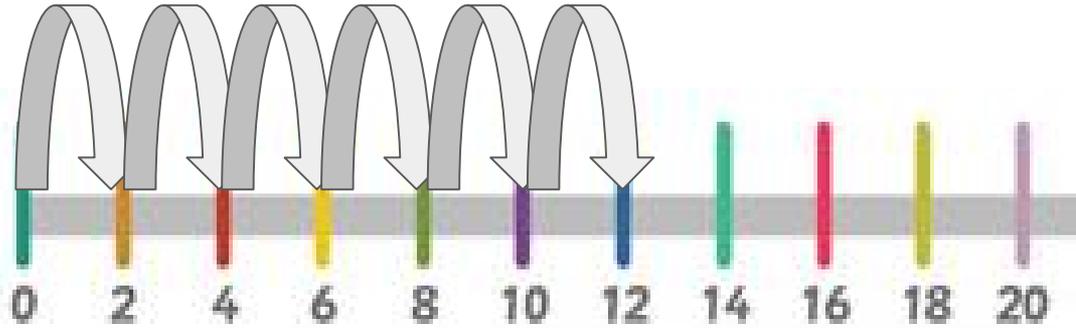
$$\begin{array}{ccccccccc} \downarrow & & \downarrow \\ 2 & + & 2 & + & 2 & + & 2 & + & 2 & + & 2 = \end{array}$$

$$6 \times 2 =$$

A number line showing the 2 times table may help you:



$$2 + 2 + 2 + 2 + 2 + 2 =$$



Your turn! Follow the steps to solve this one.
Remember - you might know your 2 times table facts! You could count in 2's.

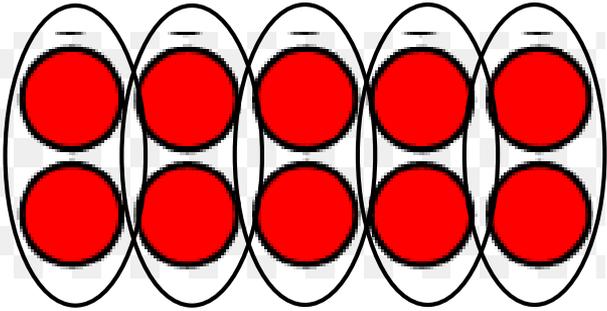


There are equal groups with
in each group.

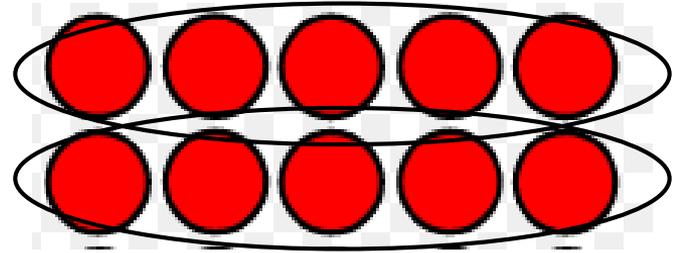
$$\square + \square + \square = \square$$

$$\square \times \square = \square$$

Think back to arrays from your last lesson.



or



There are ___ equal groups with
_____ in each group.

$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} =$$

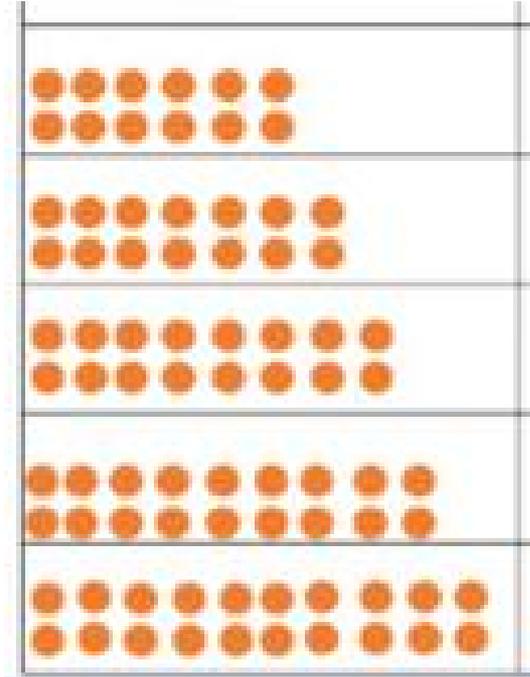
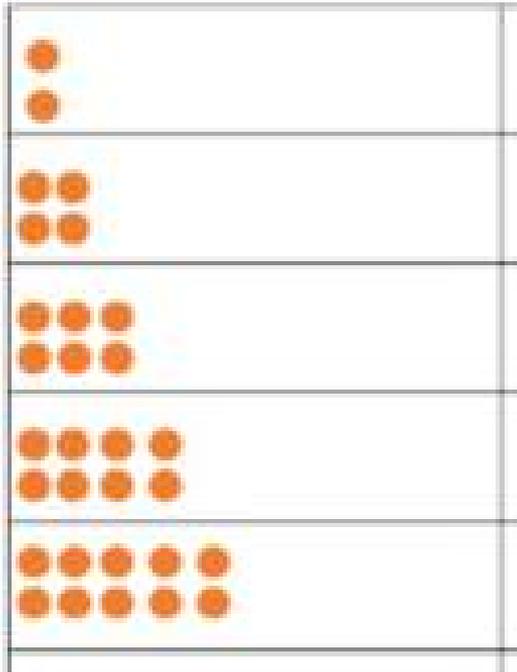
$$\underline{\quad} \times \underline{\quad} =$$

There are ___ equal groups with
_____ in each group.

$$\underline{\quad} + \underline{\quad} =$$

$$\underline{\quad} \times \underline{\quad} =$$

Your turn! Write the 2 times table facts to match these arrays:



Some of you might want to try the activity sheet now. It's a great way to practise what you've learnt today!

The 2 times-table

1 Write a fact from the 2 times-table to match the picture.

a) 
 $\square \times \square = \square$

b) 
 $\square \times \square = \square$

c) 
 $\square \times \square = \square$

2 a) Complete the number line.



b) Which times-table does the number line show?
Tick your answer.

1 times-table 2 times-table
3 times-table

How do you know?

3 Complete the array and times-table fact so that they match.

a)  $2 \times 2 = \square$

b)  $2 \times 5 = \square$

c)  $2 \times \square = 8$

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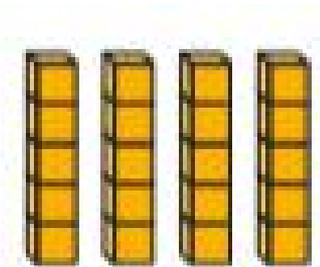
Lesson 4 - 5 times table

Today we are going to look at the 5 times table.

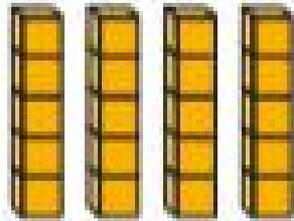
Like the last lesson, there will be a video to watch and then optional sheets to complete at the end of each lesson.

<https://vimeo.com/417922557>

What can you see?
(Think mathematically)



There are 4 towers of cubes.
Each tower has 5 cubes in.

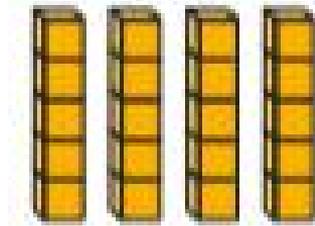


We would write this as:

There are 4 equal groups with 5 in each group.

To work out the total amount of cubes we can start off with repeated addition and then turn that into a multiplication calculation after.

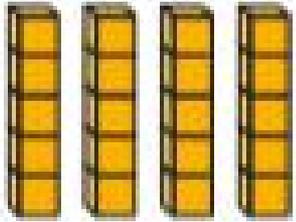
Top Tip: remember you can count in 5's!



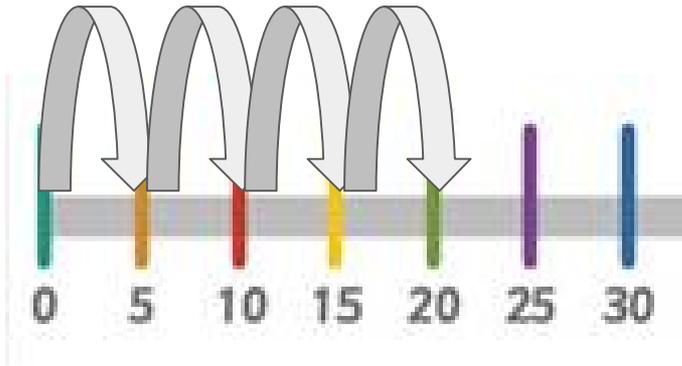
$$5 + 5 + 5 + 5 =$$

$$4 \times 5 =$$

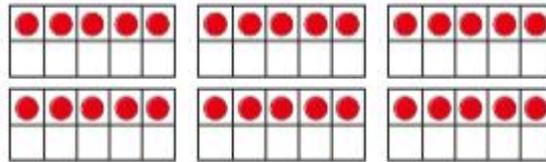
A number line showing the 5 times table may help you:



$$5 + 5 + 5 + 5 =$$



Your turn! Follow the steps to solve this one.
Remember - you might know your 5 times table facts! You could count in 5's.

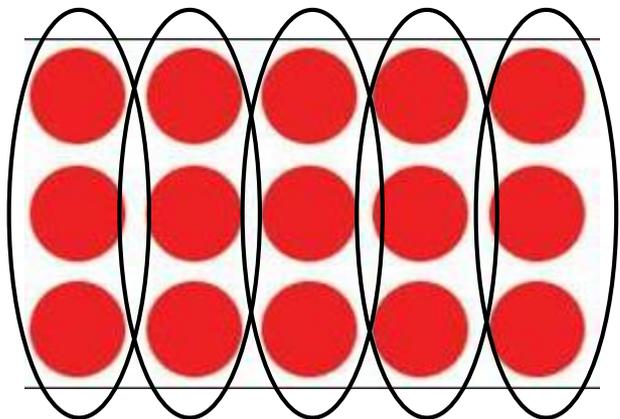


There are equal groups with
in each group.

$$\square + \square + \square + \square + \square + \square = \square$$

$$\square \times \square = \square$$

Think back to arrays from your last lesson.

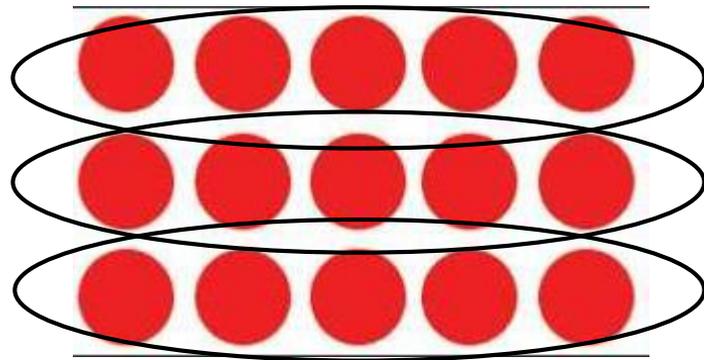


There are ___ equal groups with ___ in each group.

$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} =$$

$$\underline{\quad} \times \underline{\quad} =$$

or



There are ___ equal groups with ___ in each group.

$$\underline{\quad} + \underline{\quad} + \underline{\quad} =$$

$$\underline{\quad} \times \underline{\quad} =$$

Your turn! Draw the arrays to match these 5 times table facts:

$$1 \times 5 = 5$$

$$2 \times 5 = 10$$

$$3 \times 5 = 15$$

$$4 \times 5 = 20$$

$$5 \times 5 = 25$$

$$6 \times 5 = 30$$

$$7 \times 5 = 35$$

$$8 \times 5 = 40$$

$$9 \times 5 = 45$$

$$10 \times 5 = 50$$

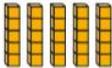
$$11 \times 5 = 55$$

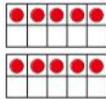
$$12 \times 5 = 60$$

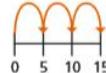
Some of you might want to try the activity sheet now. It's a great way to practice what you've learnt today!

The 5 times-table

1 a) Match the picture to the times-table fact.

 3×5

 2×5

 1×5

 5×5

b) Draw a picture to show 4×5



2 a) Complete the number line.



b) Which times-table does the number line show?
Tick your answer.

1 times-table 2 times-table

5 times-table

How do you know?

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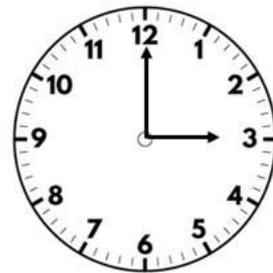
Revision of Previous Learning



- 1) What is 2×8 ?
- 2) There are 5 flowers in each vase.
How many flowers altogether?



- 3) Complete the sequence. 2, 4, 6, __ , __
- 4) Find the sum of 3, 4 and 7



- 1) Divide 15 by 5
- 2) There are 10 crayons in each pack.
How many crayons altogether?



- 3) Complete the sequence. 16, 14, 12, __ , __
- 4) Find the sum of 9, 5 and 1

1) What is $8 \div 2$?

2) Sam has 10 pairs of socks.
How many socks altogether?



3) Use $<$, $>$ or $=$ to compare.

$$5 \times 4 \quad \bigcirc \quad 5 \times 5$$

4) Calculate $42 + 10$





- 1) Divide 12 by 2
- 2) One triangle has 3 sides.
How many sides do 5 triangles have?
- 3) Use $<$, $>$ or $=$ to compare.
 3×2 2×3
- 4) Calculate $75 - 10$