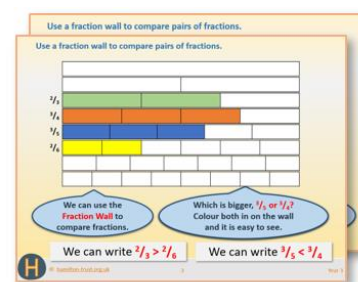


# Year 2: Week 3, Day 2

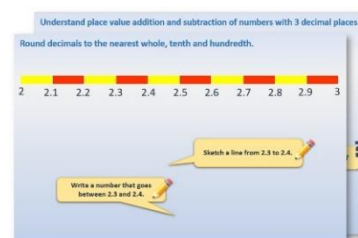
## Multiplication

Each day covers one maths topic. It should take you about 1 hour or just a little more.

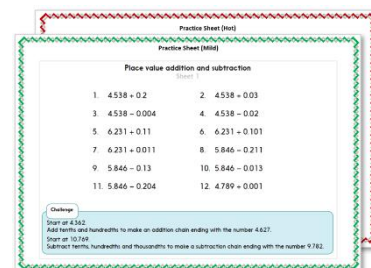
1. If possible, watch the **PowerPoint presentation** with a teacher or another grown-up.



OR start by carefully reading through the **Learning Reminders**.



2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**



4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation...**

## Learning Reminders

Know that multiplication can be done in any order.



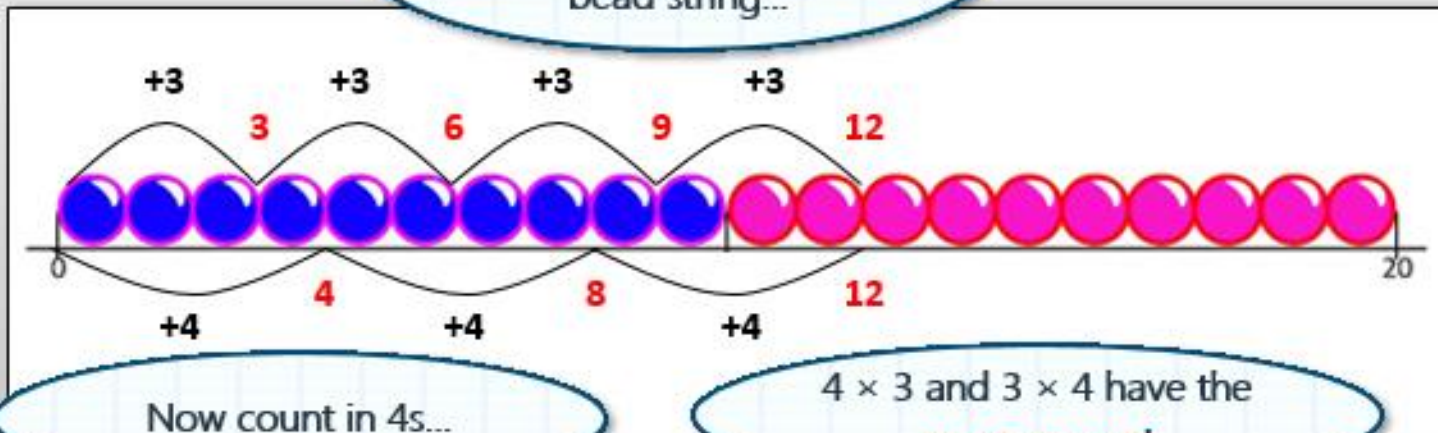
How many rows in this array? How many in each row?

$4 \times 3 = 12$ . We can read this as 4 lots of 3, or 4 times 3.

How many columns? How many in each column?

$3 \times 4 = 12$ . We can read this as 3 lots of 4, or 3 times 4.

Let's count in 3s on a bead string...



Now count in 4s...

$4 \times 3$  and  $3 \times 4$  have the same answer!

## Learning Reminders

Know that multiplication can be done in any order.



How many rows?  
How many in each row?  
How many altogether?  
What number sentence could we write?



$$7 \times 2 = 14$$

How many columns?  
How many in each column?  
What number sentence can we write?

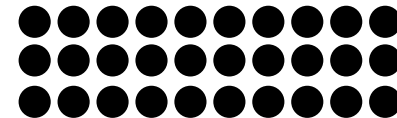
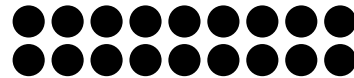
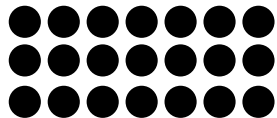
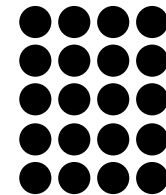
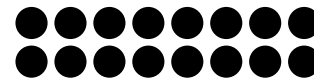
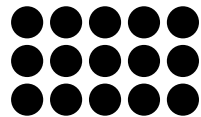
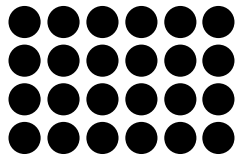


$$2 \times 7 = 14$$

$7 \times 2$  and  $2 \times 7$  have the same answer!  
**Multiplication can be done in any order.**

# Reading arrays

:U\WHWKW\K\W\DW\RD\W\WR\K\DUUD\



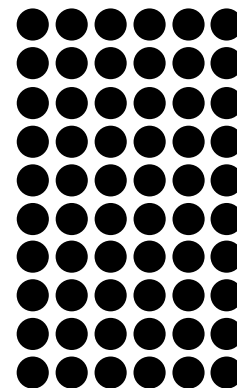
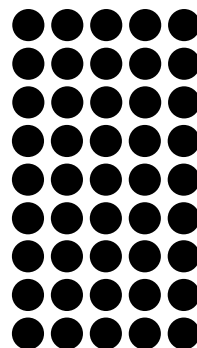
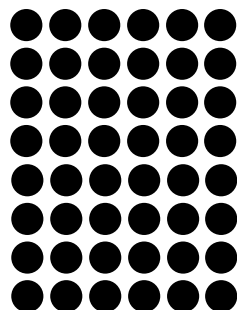
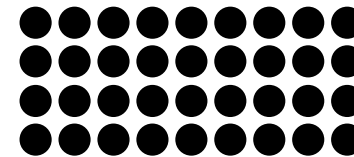
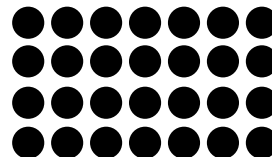
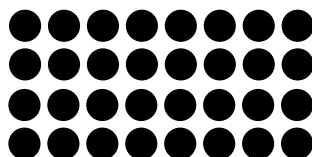
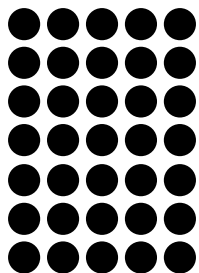
## Challenge

Draw one more array to show  $6 \times 3$ . What else does it show?

# Practice Sheet Hot

## Reading arrays

:U\WHWKWZP\W\DW\RD\W\WR\W\K\D\U\U\D\

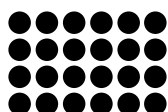


Challenge

Draw one more array to show 1 x 11. What else does it show?

## Practice Sheets Answers

### Reading arrays (mild)



$$4 \times 6 = 24$$

$$6 \times 4 = 24$$



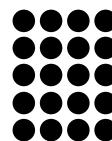
$$3 \times 5 = 15$$

$$5 \times 3 = 15$$



$$2 \times 8 = 16$$

$$8 \times 2 = 16$$



$$5 \times 4 = 20$$

$$4 \times 5 = 20$$



$$3 \times 7 = 21$$

$$7 \times 3 = 21$$



$$2 \times 9 = 18$$

$$9 \times 2 = 18$$



$$3 \times 10 = 30$$

$$10 \times 3 = 30$$

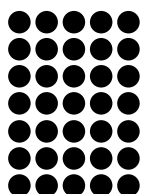
#### Challenge



$$3 \times 6 = 18$$

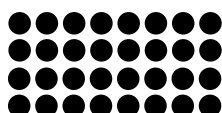
$$6 \times 3 = 18$$

### Reading arrays (hot)



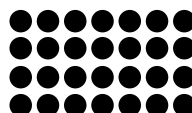
$$7 \times 5 = 35$$

$$5 \times 7 = 35$$



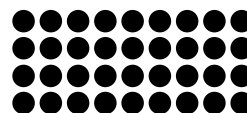
$$4 \times 8 = 32$$

$$8 \times 4 = 32$$



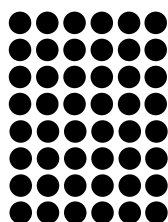
$$4 \times 7 = 28$$

$$7 \times 4 = 28$$



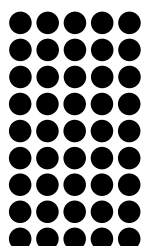
$$4 \times 9 = 36$$

$$9 \times 4 = 36$$



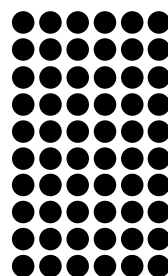
$$8 \times 6 = 48$$

$$6 \times 8 = 48$$



$$9 \times 5 = 45$$

$$5 \times 9 = 45$$



$$10 \times 6 = 60$$

$$6 \times 10 = 60$$

#### Challenge

$$1 \times 11 = 11$$

$$11 \times 1 = 11$$



## Investigation

### Mrs Multiple's cakes

1. Mrs Multiple, the baker, has made 12 cup cakes. She is thinking how to arrange them in her shop window. She likes to arrange them in rectangles like this:



In maths, these rectangles are called arrays.

She could also arrange the 12 cakes like this:



2. How else could she arrange them? Use 12 counters to help you and write down how many ways you found altogether.
3. How many ways could she arrange 15 cakes in an array? Do you think there will be more or fewer ways than arranging 12 cakes?
4. Which number of cakes from 10 to 20 can be arranged in the most ways?

Can bigger numbers of cakes always be arranged in more ways than smaller numbers?

Can you think of a number of cakes between 20 and 30 that can only be arranged in two ways? Which numbers of cakes between 20 and 30 do you think could be arranged in lots of ways? Why?