Welcome

LKS2 – Year 3 and Year 4 Maths Workshop

What we will look at…

- Format of a LKS2 Maths lesson
- Things that will help your child (take home pack)

How we teach Maths

- Four lessons per week
- Arithmetic test every two weeks
- Open ended Maths investigation every two weeks
- Formal testing (NFER) once a term

Typical Lesson Format

- Date and WALT
- Fast Four
- Hook and class discussion
- Modelled Activity (I Do)
- Worked Example (We Do)
- Independent Work – fluency, reasoning and problem-solving tasks (You Do)

Date and WALT

WALT – we are learning to…

Fast Four

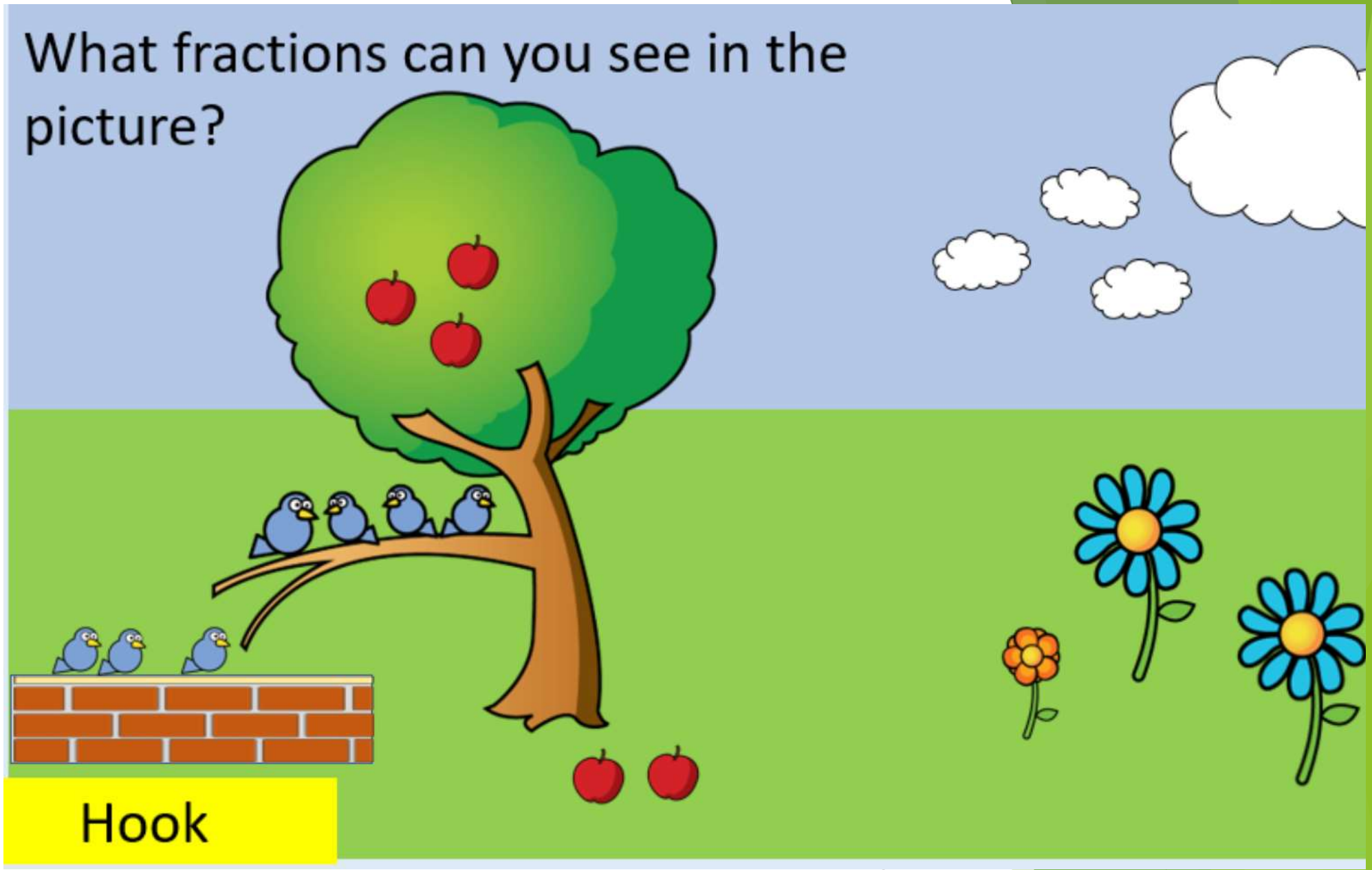
1. Draw base 10 to represent 274.	2. How many balloons are there? 
3. What is the value of the ones digit in 96?	4. What is 15 divided by 5?

Challenge:
Write a sentence to explain what an even number is

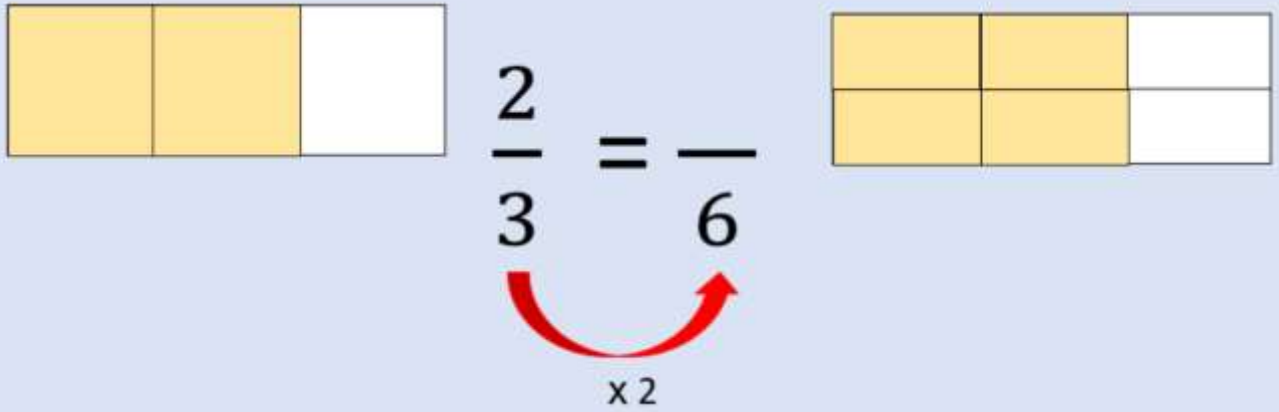
Fast Four

1. What is 1,000 more than 9,978?
2. Write the smallest number:
   625 1,400 3,280 4,000
3. Find the sum of 97 and 4905
4. Complete the sequence:
   3,6,__,12, ___

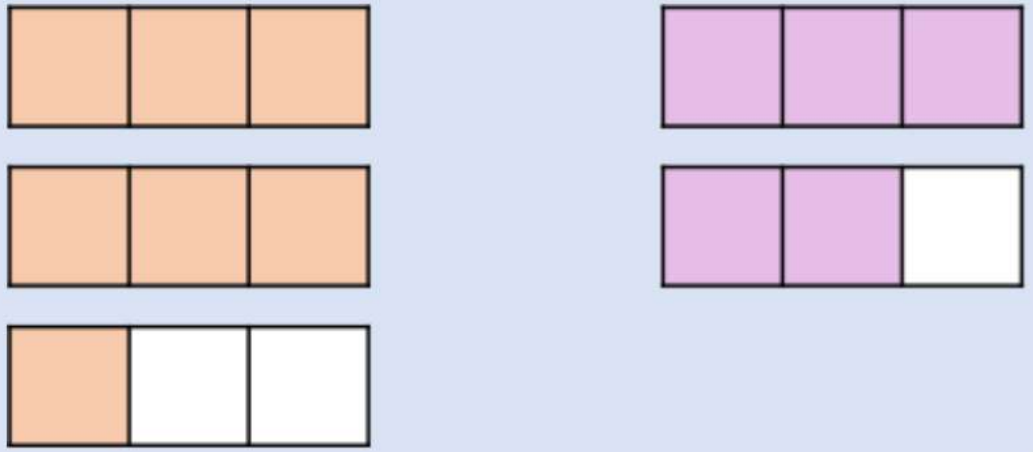
Hook



I Do - Modelled Activity



Which fraction is greater, $2\frac{1}{3}$ or $1\frac{2}{3}$?



$2\frac{1}{3} > 1\frac{2}{3}$

We Do – Worked Example

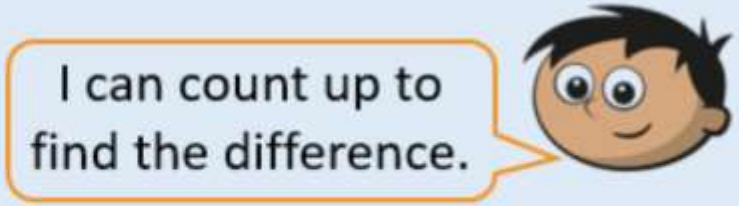
Put the mixed numbers in order, starting with the smallest.

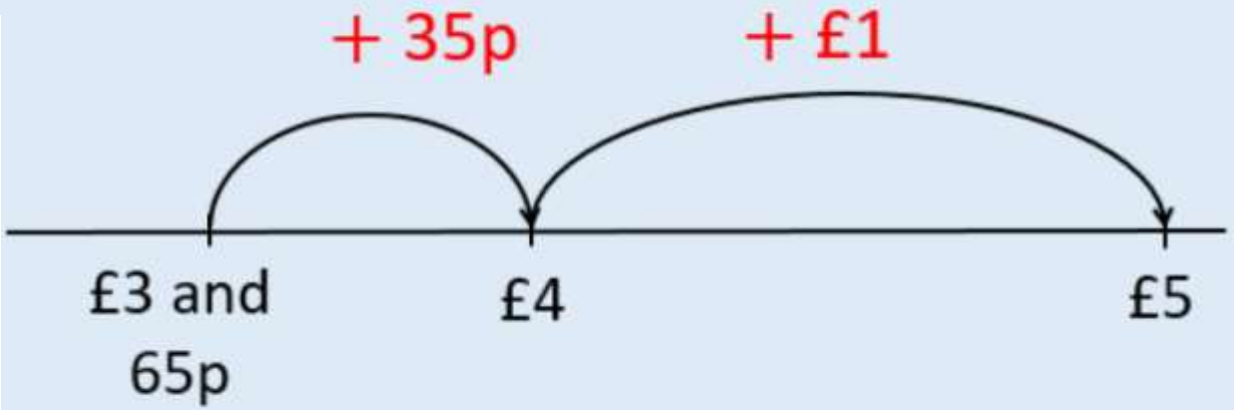
$7\frac{3}{10}$ $7\frac{9}{10}$ $7\frac{1}{2}$ $7\frac{6}{10}$

Fluency

£5 − £3 and 65p

£5 − £3 and 65p





The difference is £1 and 35p

Fluency Task

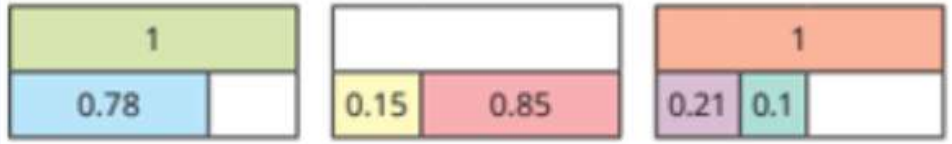
Fill in the missing numbers.

a) $0.3 + 0.4 + \square = 1$

b) $\frac{1}{10} + \square + 0.3 = 1$

c) $0.5 + \frac{3}{10} + \square = 1$

Complete the bar models.



Rosie has 56 pencils.

a) Draw base 10 to show the pencils.

Rosie shares the 56 pencils equally between 4 pots.

b) Draw base 10 on the place value chart to share the pencils.

Tens	Ones

c) How many pencils are there in each pot? ☐

d) Did you have to make an exchange?

Problem Solving and Reasoning Task

88 can be divided equally by 2 and by 4

Do you agree with Annie? _____

Explain why.

_____

_____

_____

Can Annie divide 88 equally by any other 1-digit numbers?

Whitney, Eva and Jack are growing flowers.

Whitney

My flower is exactly 1 m tall.

My flower is 11 cm shorter than Whitney's flower.

Eva

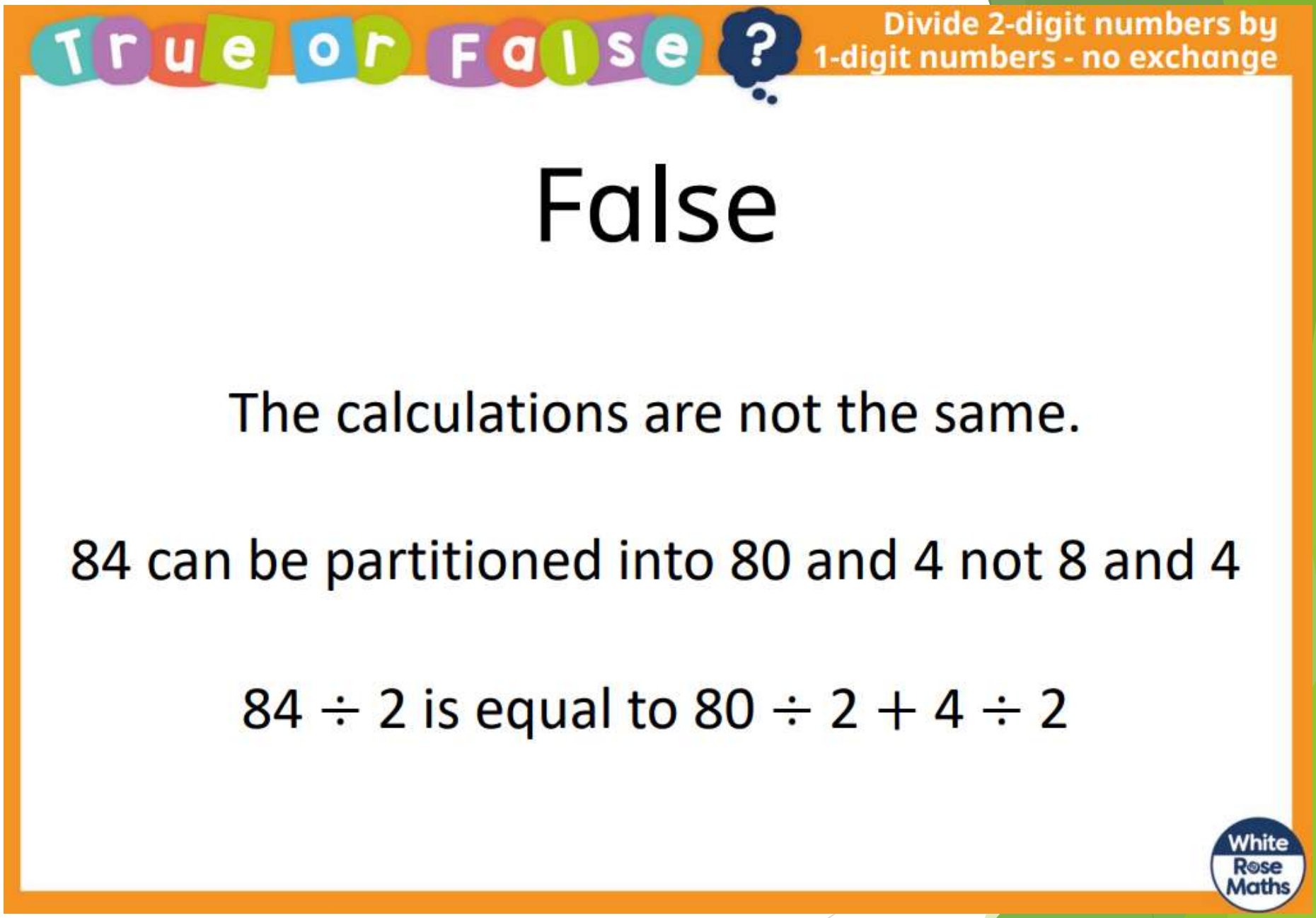
Jack

My flower is taller than Eva's flower, but shorter than Whitney's flower.

How tall is Eva's flower in metres?

How tall could Jack's flower be in metres?

Plenary


True or False ?
Divide 2-digit numbers by 1-digit numbers - no exchange
False
The calculations are not the same.
84 can be partitioned into 80 and 4 not 8 and 4
84 ÷ 2 is equal to 80 ÷ 2 + 4 ÷ 2
White Rose Maths

27.9.24

Purple polishing

WALT: round to the nearest 1,000

Fast Four

We would normally do a Fast Four, however today we are going to jump into a shorter lesson.

Hook

Mrs Sullivan thinks that Mo's score on Game 2 rounded to the nearest 1,000 is 5,000.

Do you agree?

Why?

Key Words:

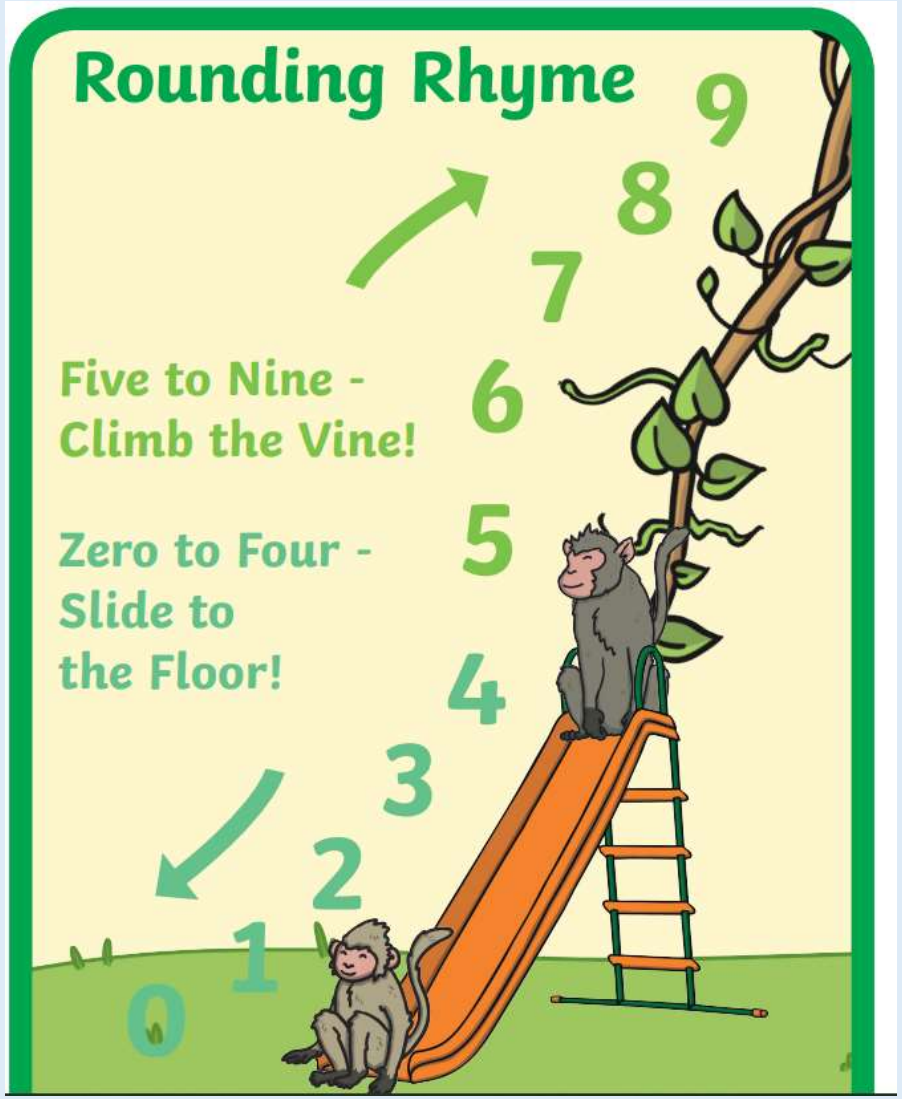
Tens
Hundreds
Thousands
Order
Rounding
Round

Our topic is: number and place value

When rounding to the **nearest 10**, we look at the **ones column**.

When rounding to the **nearest 100**, we look at the **tens column**.

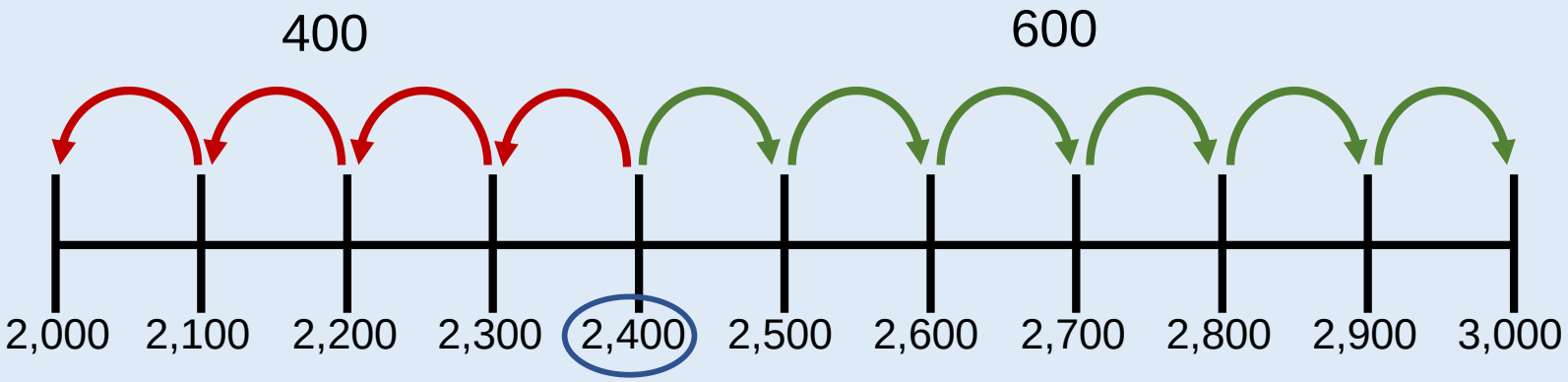
When rounding to the **nearest 1,000**, we look at the **hundreds column**.



- Tens – Hundreds – Thousands – Order - More Than > - Less Than < - Rounding – Round –

I do

Round 2,400 to the nearest 1,000



When rounding to the **nearest 1,000**, we look at the **hundreds column**.

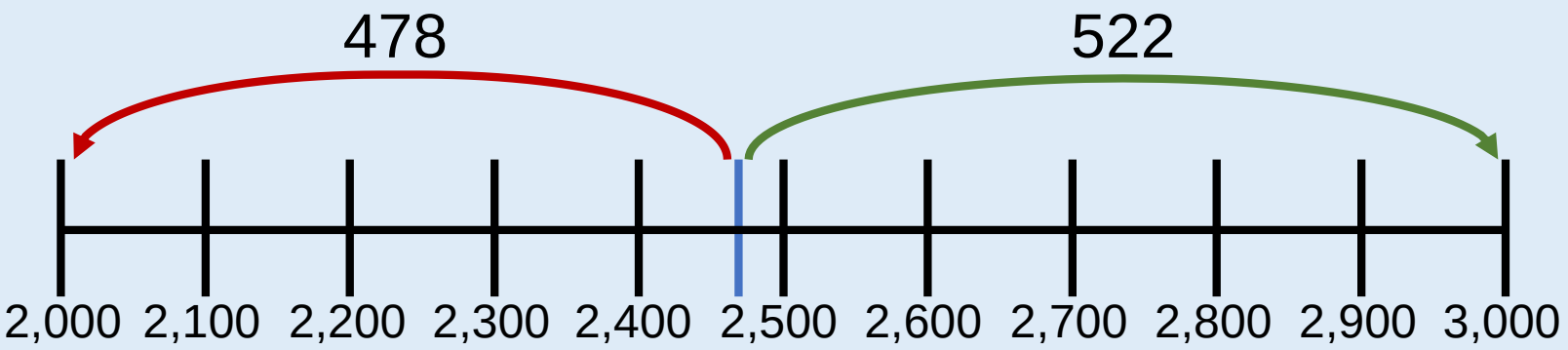
2,400 is closer to 2,000 than 3,000

2,400 rounded to the nearest 1,000 is 2,000

- Tens – Hundreds – Thousands – Order - More Than > - Less Than < - Rounding – Round –

I do

Round 2,478 to the nearest 1,000



When rounding to the **nearest 1,000**, we look at the **hundreds column**.

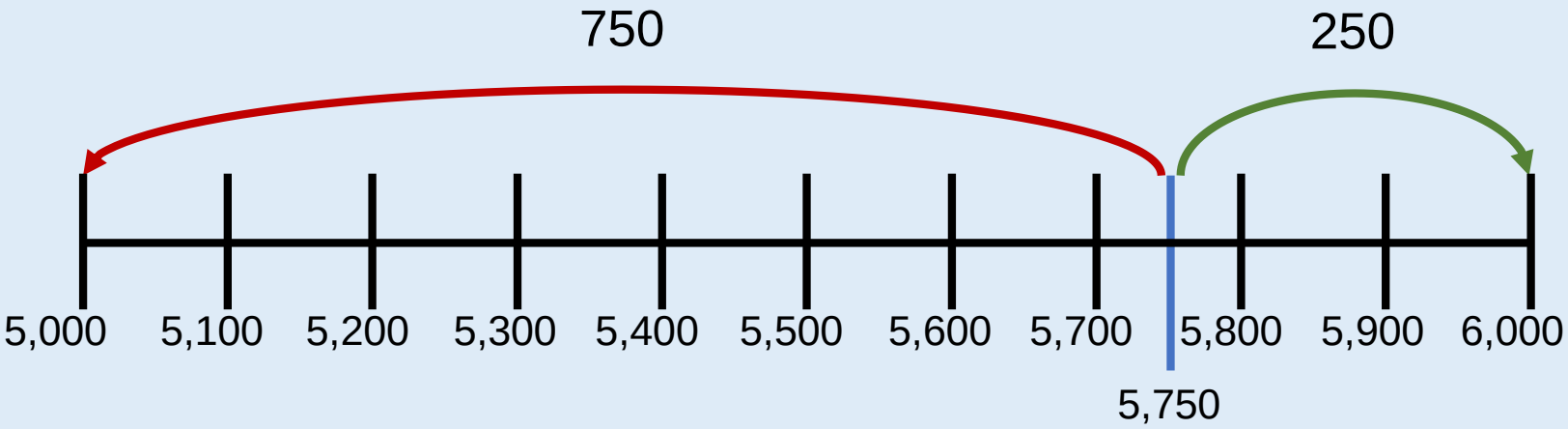
2,478 is closer to 2,000 than 3,000

2,478 rounded to the nearest 1,000 is 2,000

- Tens – Hundreds – Thousands – Order - More Than > - Less Than < - Rounding – Round –

We do

Round 5,750 to the nearest 1,000



When rounding to the **nearest 1,000**, we look at the **hundreds column**.

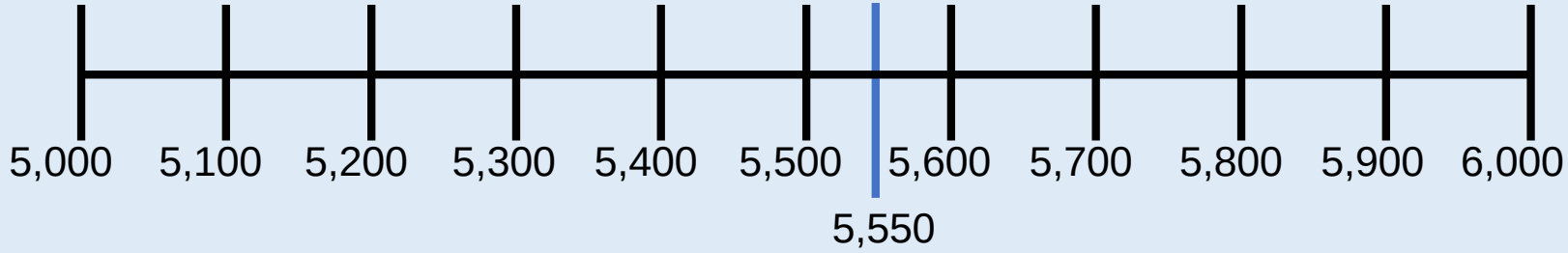
5,750 is closer to 6,000 than 5,000

5,750 rounded to the nearest 1,000 is 6,000

- Tens – Hundreds – Thousands – Order - More Than > - Less Than < - Rounding – Round –

You do

Round 5,550 to the nearest 1,000

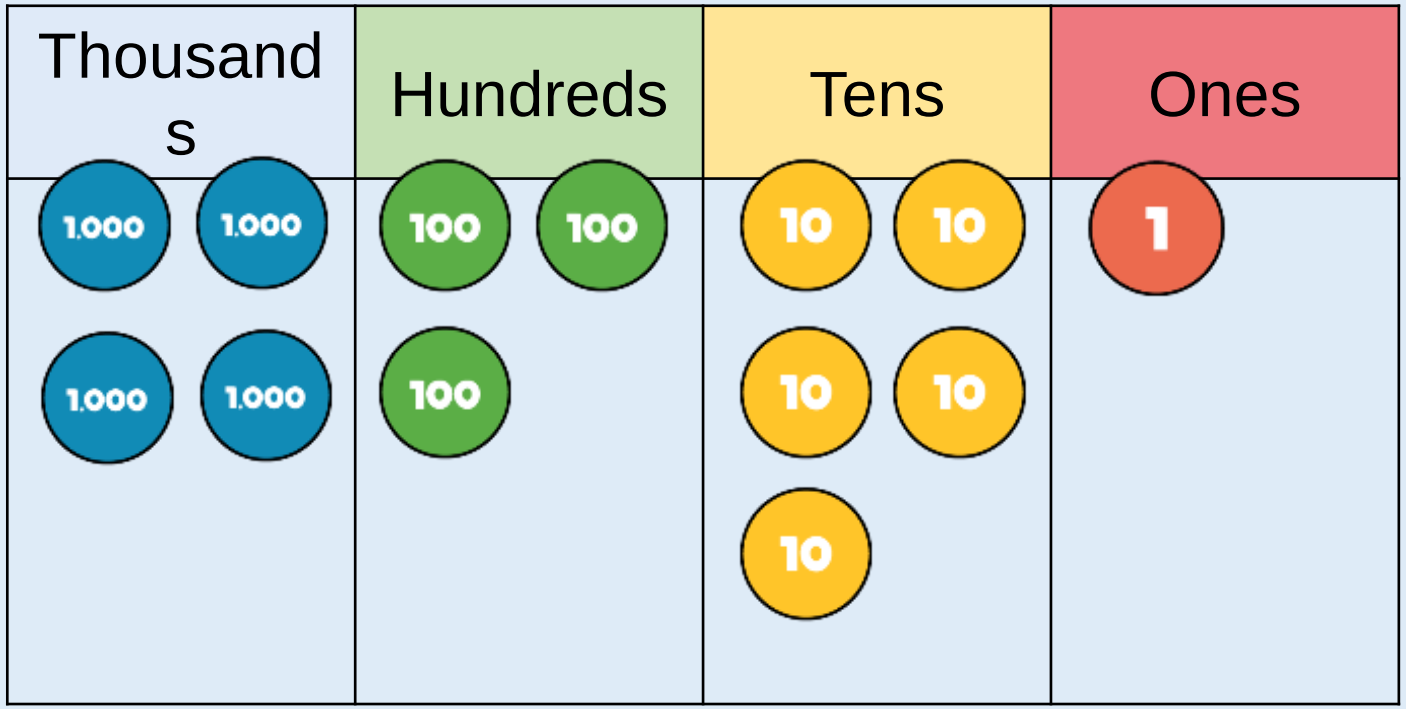


When rounding to the **nearest 1,000**, we look at the **hundreds column**.

- Tens – Hundreds – Thousands – Order - More Than > - Less Than < - Rounding – Round –

We do

Round 4,351 to the nearest 1,000



When rounding to the **nearest 1,000**, we look at the **hundreds column**.

- Tens – Hundreds – Thousands – Order - More Than > - Less Than < - Rounding – Round –

Hinge Questions

Which is the correct answer?

What is 6,747 rounded to the nearest 1,000?

A) 6,000

B) 6,700

C) 7,000

- Tens – Hundreds – Thousands – Order - More Than > - Less Than <

Fluency and Reasoning

Your turn - have a go at the Fluency and R tasks

Challenge

Try the challenge if you finish.

Fluency

1 Use the number lines to help you complete the sentences.

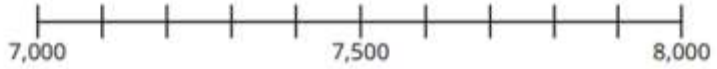
a)

2,700 rounded to the nearest 1,000 is ☐

b)

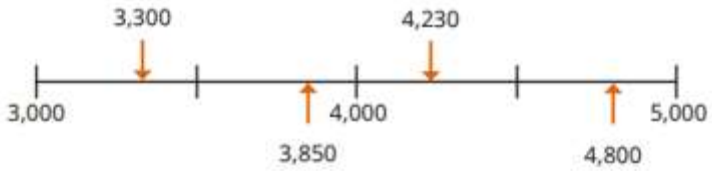
5,300 rounded to the nearest 1,000 is ☐

c)



7,450 rounded to the nearest 1,000 is ☐

2 Circle the numbers that round to 4,000 to the nearest 1,000



3 Which numbers round to 9,100 to the nearest 100?

9,130	**8,950**	**9,059**
9,045	**9,009**	**9,107**

Reasoning

4 Explain why 7,800 rounds to 8,000 to the nearest 1,000

5 Dora makes a number using place value counters.

Thousands	Hundreds	Tens	Ones
1,000	100 100 100 100 100	10 10 10 10 10 10 10 10	1 1 1

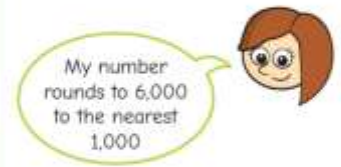
a) Round Dora's number to the nearest 1,000

b) Round Dora's number to the nearest 100

c) Round Dora's number to the nearest 10

Rosie makes a 4-digit number using the digit cards.

6	4	9	5

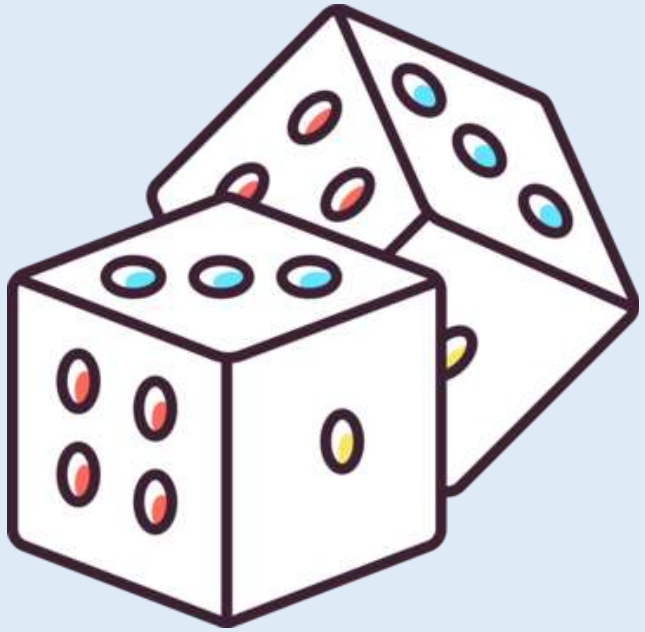


What number could Rosie have made?

Is there more than one possibility?

Problem Solving – Round the Dice

1) Roll the dice 4 times and write down the digits on your whiteboard.
2) Make 4 numbers that each have 4 digits and write them down.
3) Round them to the nearest 10, 100 and 1,000.



Do any of them round to the same multiple of 10, 100 or 1,000?

RAG rate

S A = R A G

I would like more help with

I found ___ difficult because _____

I think a _____ might help me

I would like more help with

I am a little unsure about _____ because __

I would like to try a few more Qs

I think I could explain it to someone else

I am most confident with _____

I would like a challenge question for the next lesson

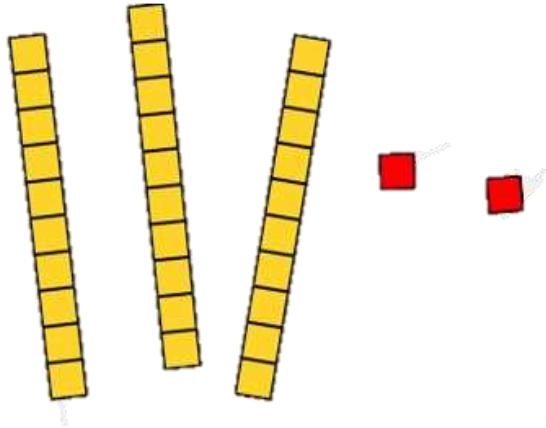
Thank you!

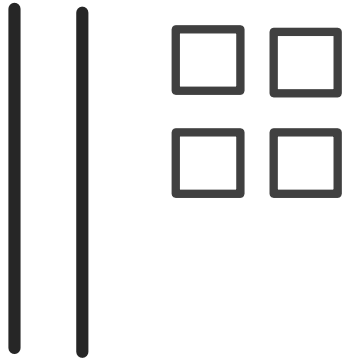
The final slides are printed to take with you, they include:

- Practical resources
- Online resources
- How to help at home

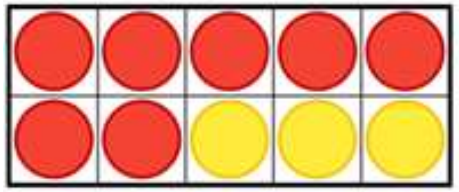
If you have any further questions or feedback, please contact your child's class teacher or Mr Withers.

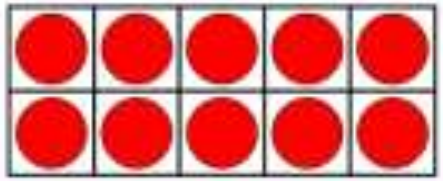
Dienes or Base 10

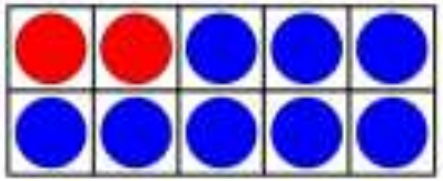




Tens Frames and Counters

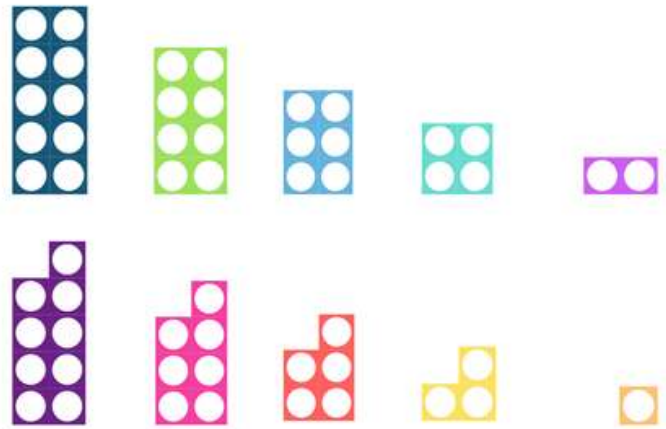






Rekenreks

Multilink Blocks and Numicon



Mathematical Vocabulary

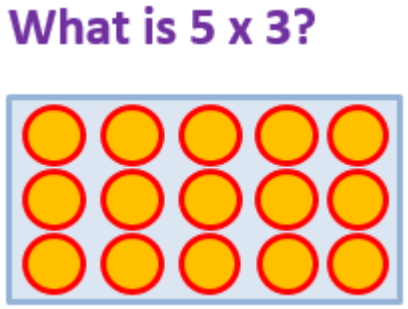
Partition

This is when we break a number down into parts. This can be into tens and ones or another way.

Mathematical Vocabulary

Array

A pictorial representation, usually shown as rows of dots, to help visualise multiplication and division.



Mathematical Vocabulary

Commutativity

The understanding that addition and multiplication can be done in any order.

For example: 3 + 1 or 1 +3

Mathematical Vocabulary

Inverse Calculation

Using the opposite of an operation to either reverse or check a calculation.

For example: addition is the inverse of subtraction

Mathematical Vocabulary

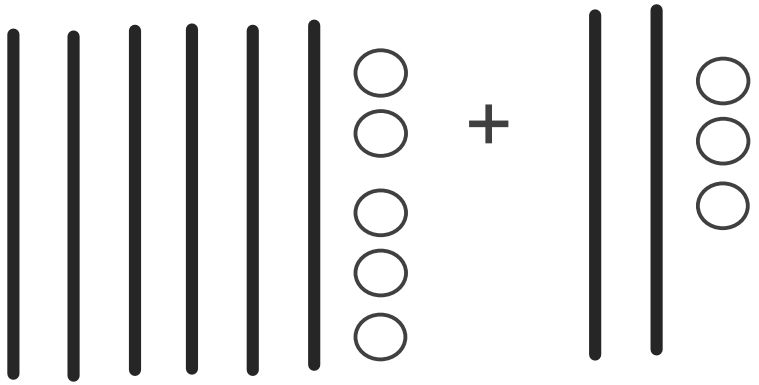
Vertex or Vertices

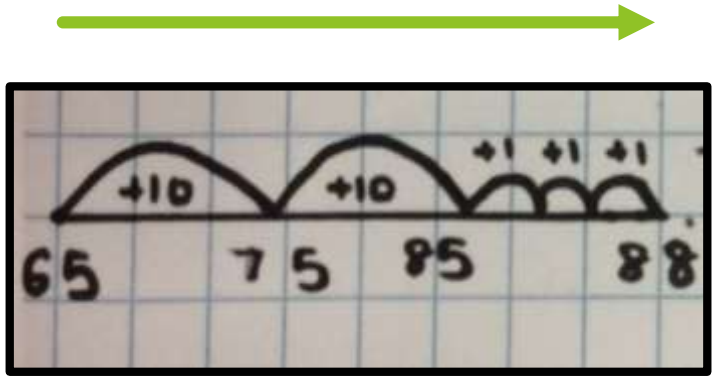
Also known as a corner or corners. This is used to refer to the point at which faces meet on a 3D shape or where two sides meet on a 2D shape.

Practical and Written Methods - Addition

65 + 23

20 3





60 + 20 = 80

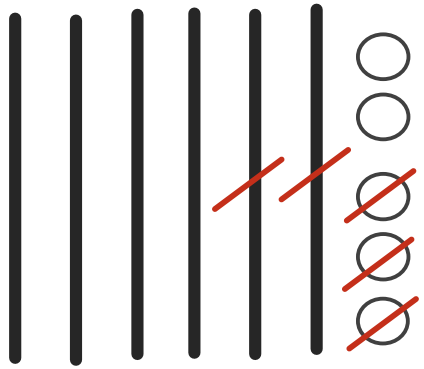
5 + 3 = 8

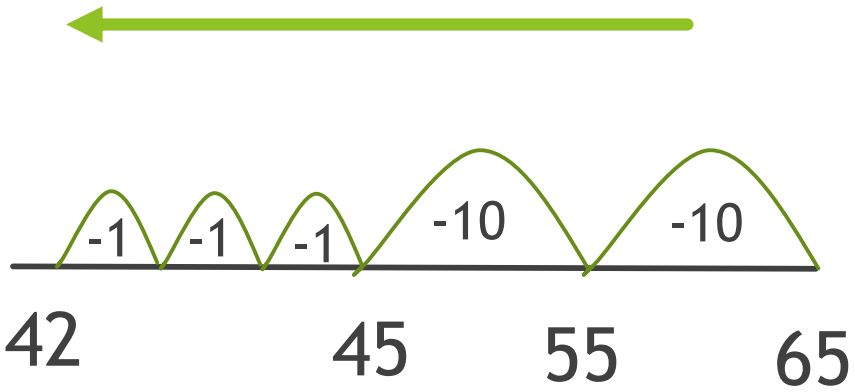
80 + 8 = 88

Practical and Written Methods – Subtraction

65 - 23

20 3



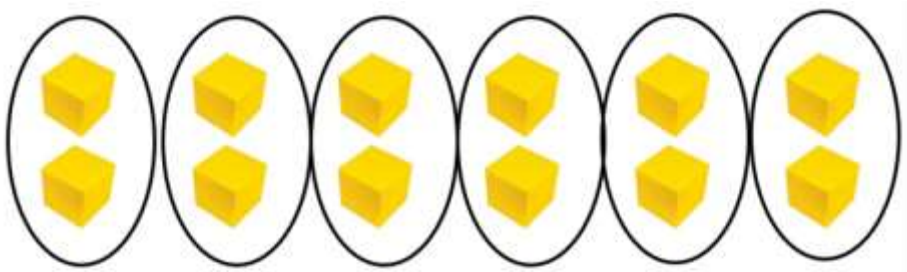


60 - 20 = 40

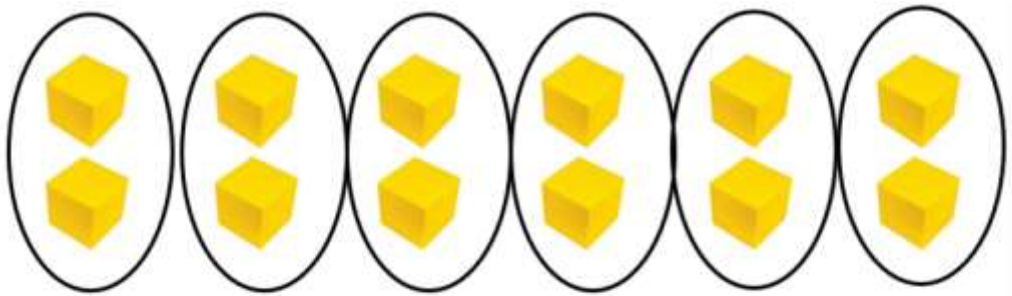
5 - 3 = 2

40 + 2 = 42

Practical and Written Methods – Multiplication



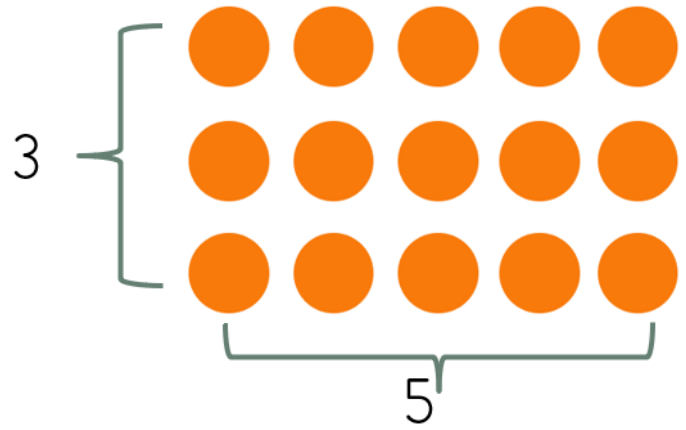
There is 2 grouped 6 times.
That's 12 altogether.

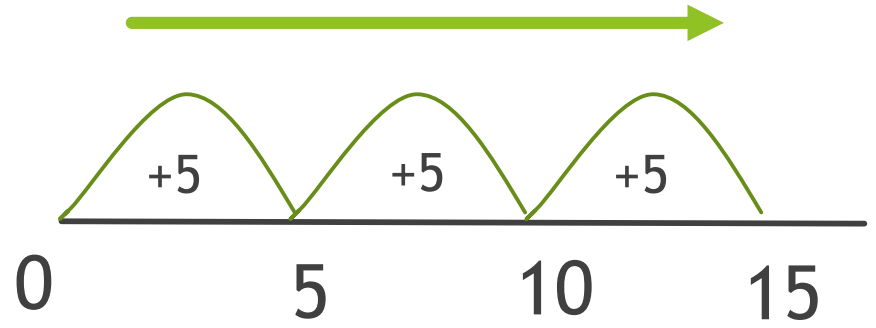


2 + 2 + 2 + 2 + 2 + 2 = 12

Practical and Written Methods – Multiplication

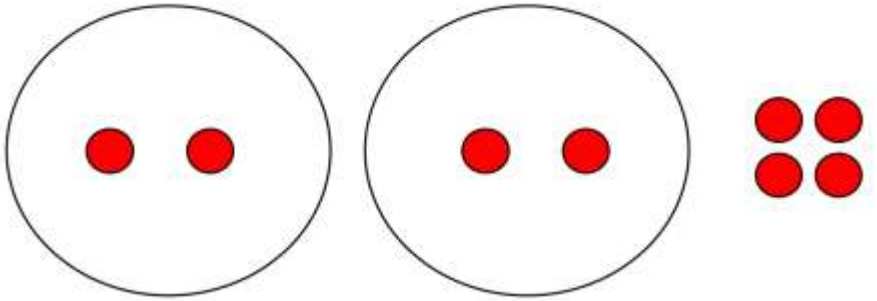
5 grouped 3 times or 5 + 5 + 5





Practical and Written Methods – Division

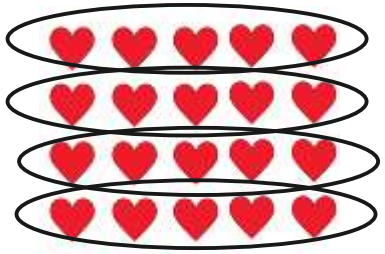
Sharing



There are 4 altogether.
There are 2 groups in total.
There are 2 in each group.

4 ÷ 2 = 2

Grouping

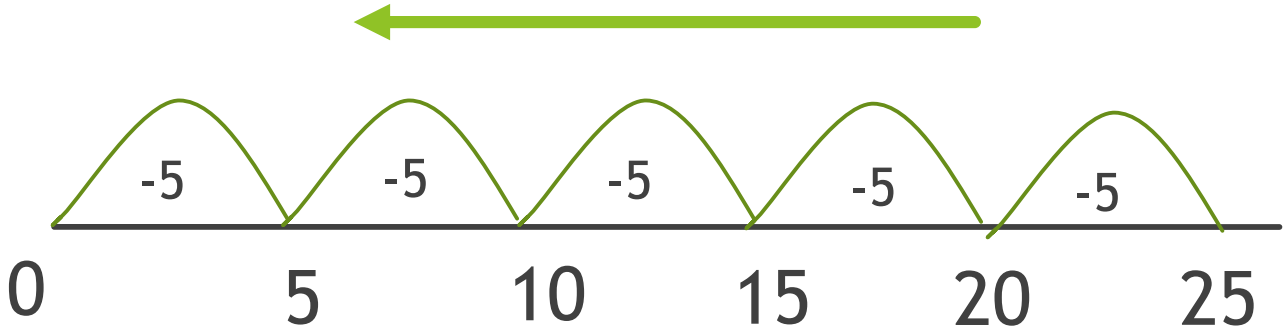


How many hearts altogether?
How many in each group?
How many groups?

20 ÷ 4 = 5

Practical and Written Methods – Division

$$25 \div 5 = 5$$



25				
5	5	5	5	5

What can help maths at home?

- Fluency games such as Hit the Button
- Maths as part of every day life
- Quick and accurate recall
- KIRFs practise little and often

KIRFs – Key Instant Recall Facts

- Each half term, we will send home the key number facts that your child will need to become familiar with
- Please spend time practising these facts with your child, as it will be extremely beneficial to their maths learning
- The KIRFs are half term specific, meaning that they increase in complexity throughout the academic year

How you can help your child at home

- **Encourage a positive mindset in Maths.**
  - Tell them how good they are. Let your child know that they have unlimited maths potential and that being good at maths is all about working hard.
  - Explain how much you enjoy the subject.
  - Always be encouraging and never tell them they are wrong when they are working on maths problems. Instead find the logic in their thinking. For example if your child multiplies 3 by 4 and gets 7, say – Oh I see what you are thinking, you are using what you know about addition to add 3 and 4, when we multiply we have 4 groups of 3…
- **Encourage good number sense.**
  - For example, when working out 29 + 56, if you take one from the 56 and make it 30 + 55, it is much easier to work out. The flexibility to work with numbers in this way is what is called number sense and it is very important.
- **If you are worried about confusing your child with a different method when supporting your child with home tasks, use our calculation policy on the school website to support you child with home learning.**
  - http://www.hagleyprimary.org.uk/Maths/
- **Encourage your child to play Maths games and puzzles.**
  - The next two slides have a list of apps and websites you and your child may enjoy.

Useful websites and apps

Useful Websites for Children

http://nrich.maths.org
http://amathsdictionaryforkids.com
http://www.ictgames.com/resources.html
http://www.ilovemathsgames.com
http://www.mathsisfun.com
http://www.mathszone.co.uk
http://www.primarygames.co.uk
http://www.topmarks.co.uk
https://ec1.educationcity.com
http://www.bbc.co.uk/education
http://resources.woodlandsjunior.kent.sch.uk/maths/index.html
http://www.mathsisfun.com
http://www.primaryresources.co.uk
https://ttrockstars.com/login

Useful Websites for Parents/Carers

http://ncetm.org.uk
http://nrich.maths.org/frontpage
http://www.oxfordowl.co.uk/maths-owl/maths
http://www.maths4mumsanddads.co.uk/index.php

Useful websites and apps

App icon	Developer	Topic
	Multiplication genius x19 free	Times table multiplication quiz
	Mathseeds: Fun Maths games	Maths games: four operations and place value
	Prodigy Math Game	Game with maths activities
	Doodle Maths: Primary Maths	Games and quizzes
	Times Table Rock Stars	Multiplication and division
	White Rose One Minute Maths	Maths quizzes