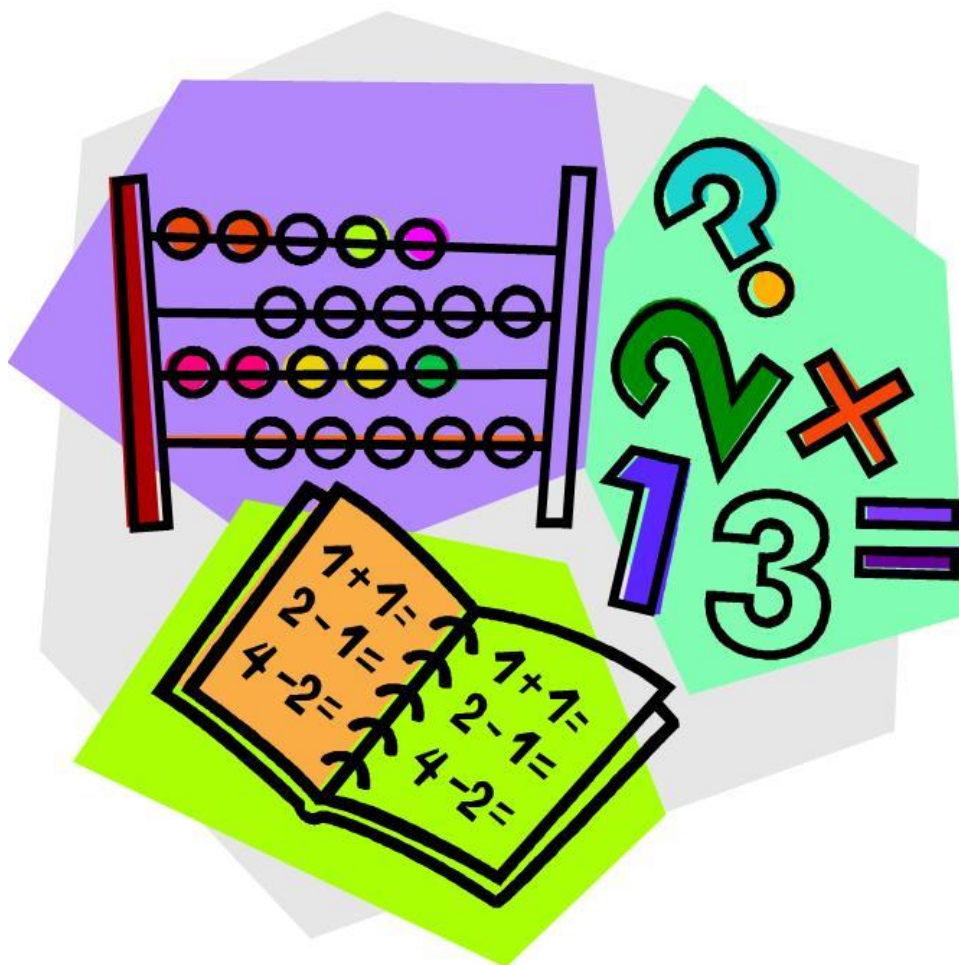# Year 3 -Year 4

Summer Transition Activity Booklet

Mathematics

Lake Farm Park Academy

Name:_____

Instructions

The aim of this activity booklet is to develop key areas of Mathematics (particularly mental arithmetic) to support knowledge and confidence in preparation for Year 5. Each week there will be the following:

1/ A mental warm up – This will be timed (you have 10 minutes) – You are given a start number and you may complete any question you like in any order. How many can you do? The aim is to increase your speed and accuracy over the weeks ahead.

2/ Did you know? – This section looks at some of the key vocabulary and knowledge you will need to complete the weekly focus.

3/ Misconceptions – This section contains questions to explore some of the big misconceptions in this topic. Can you avoid some of the big errors made?

4/ Try this! – This contains 5 questions for you to try in your focus for the week and explain how you did them.

5/ Word problems – This section will focus on a range of word problems – draw pictures to help you!

6/ Maths Mastery – In this section, you will have a range of different questions in which you have to make connections and provide reasons for your answers.

7/ Test-based questions – In this section, you will be given a series of test questions based on what you have learnt.

8/ What did you learn? – Write down what you remembered and helpful tips to remember important information you will need in Year 4.

9/ I'm still not sure about…. – In this section, note anything you are still not sure in this topic. This can be reviewed in your first week back in Year 4.

Remember to bring your completed pack with you on your first day in Year 4!

Timetable

Week	Mathematics Focus
1	Place value, addition and subtraction
2	Multiplication and Division
3	Converting measurements
4	Fraction and decimals
5	Money and Time
6	Properties of shape

Andy Addition

total add

combines 2 or more numbers

joins sets

plus

addend
2+2=4 ← sum

find the sum

Week 1 – Place value, addition and subtraction

1/Mental warm up: Your number is 265

How many of all of these questions can you do 15 minutes? Set the timer.

1. **What does the digit 6 represent?**
2. **What does the digit 2 represent?**
3. **What does the digit 5 represent?**
4. **Round to the nearest 10.**
5. **Round to the nearest 100.**
6. **What is 20 more?**
7. **What is 300 more?**
8. **What is 30 less?**
9. **What is 4 less?**
10. **Which is more? 265 __ 205 using > < =**
11. **How many hundreds make 200?**
12. **How many 10s make 60?**
13. **What is half of 60?**
14. **What number is between 200 and 300?**
15. **What is 265 + 134?**
16. **What is 265 + 1203?**
17. **Write the number in roman numerals.**

Challenge:

1. 1245 + 356 =
2. 399 + 427 =
3. 2002 + 48 =
4. 1385 - 492 =
5. 481 – 287 =

Roman Numerals
1 – 1000 Helpsheet

1 =	I	40 =	XL
2 =	II	50 =	L
3 =	III	60 =	LX
4 =	IV	70 =	LXX
5 =	V	80 =	LXXX
6 =	VI	90 =	XC
7 =	VII	100 =	C
8 =	VIII	101 =	CI
9 =	IX	150 =	CL
10 =	X	200 =	CC
20 =	XX	500 =	D
21 =	XXI	800 =	DCCC
30 =	XXX	1000 =	M

2/Did you know?

https://www.bbc.com/bitesize/topics/zsjqtfr - place value

https://www.bbc.com/bitesize/topics/zy2mn39 - addition and subtraction

Key vocabulary:

Place value

ones
tens, hundreds
digit one-, two- or three-digit number
place, place value stands for
represents
exchange
the same number as, as many as
more, larger, bigger, greater
fewer, smaller, less, fewest, smallest, least
most, biggest, largest, greatest
one more, ten more, one hundred more, one
thousand more
one less, ten less, one hundred less, one
thousand less
equal to
compare
order
size
first, second, third … twentieth
twenty-first, twenty-second … last, last but on
before, after
next
between
halfway between
above, below

Addition and subtraction

addition
add, more, sum
total
altogether
double
near double
half, halve
one more, two more… ten more… one
hundred more
how many more to make …?
how many more is … than …?
how much more is …?
subtract
take away
how many are left/left over?
how many have gone?
one less, two less, ten less … one hundred less
how many fewer is … than …?
how much less is …?
difference between
equals
is the same as number bonds/pairs/facts
missing number
tens boundary, hundreds boundary
inverse

3/ Misconceptions

99 + 101 =

403 + 406 =

945 – 237 =

1. What strategies would you use to work out the answers to these calculations? Could you use a different method?
2. Which column do you begin with?
3. Does your answer make sense? (estimate first)
4. Zero is a placeholder. What does this mean?
5. Why is it important to include zeros in our answers?
6. Why isn't it sensible to take the larger number from the smaller (5-7)?
7. What do we need to do instead?
8. Where will we get our extra 10, 100 etc. from?

4/ Try this!

1. Complete the calculations below using the column method.

1425 + 2031 =

382 − 216 =

2416 − 1732 =

2. There are mistakes in the following calculations. Explain the mistake and then make a correction to find the correct answer.

```
 782
-435
 353
```

3. Use the digits 5, 2, 7 to make 2 numbers. Add them together and then find the difference.

5/ Word problems

1. a - Harry has 1357 stickers, John has 1263. How many do they have altogether?
   b - If Harry gives John 83 stickers, how many do they have each now?
2. Julie has 578 stamps, Heidi has 456 stamps. How many stamps do they have altogether? Show how you can check your answer using the inverse.
3. a - Alice is trying to complete a sticker book. It needs 350 stickers overall. She has 134 in the book and a further 74 ready to stick in.
   b - How many more stickers will she need?

6/ Maths Mastery

Kiz has these numbers:

1330   1303   1033   1003   1030

He writes them in order from smallest to largest.
What is the fourth number he writes?

Match 4600 to numbers with the same value.

460 tens
460 hundreds
4600 | 46 hundreds
4600 ones
46 tens

Using these 4 digits:

| 1 | 7 | 3 | 0 |

What is the smallest number you can make?
What is the largest number you can make?

5000 years ago Egyptians carved number symbols on their tombs:

| = 1

∩ = 10

℮ = 100

What is the value of these Egyptian numbers?

℮ ∩ ∩ |||

℮ ∩ ∩ ||| + ℮ ∩ ∩ ||||

℮ ℮ ℮ ∩ ∩ |||| + ℮ ℮ ∩ ∩ ∩ ∩ |||||||||||

Identify the missing numbers in these bar models. They are not drawn to scale.

1000		
	353	354

2000		
493		754
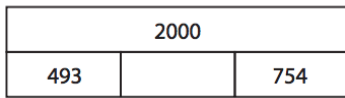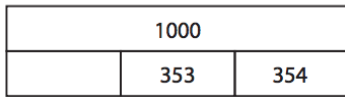
Select your own numbers to make this bar model correct.

5000		
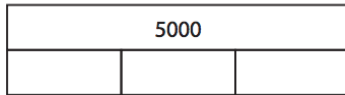
Ali and Sarah calculate 420 + 221 + 280 using different strategies.

This is Sarah's strategy:
420 + 221 + 280
420 + 221 = 641
641 + 280 = 921
Answer = 921

This is Ali's strategy:
420 + 221 + 280
420 + 280 = 700
700 + 221 = 921
Answer = 921

Which do you prefer?

Explain your reasoning.

Now calculate 370 + 242 + 130 using your preferred strategy.

7/ Test based questions   Challenge:

467 + 234 =

5,813 + 1,359 =

707 + 1,818 =

8,031 − 4,219 =

These are the prices at Will's Corner Store:

CHOCO

Curly Crisps:
45p a packet

Juicy Juice:
60p

Mmmm minties:
35p a tube

Cheeky Choco:
60p a bar

c) Adam goes to Will's corner store. He buys: 3 bottles of juice, 1 cheeky choco bar, 2 packets of curly crisps and 3 tubes of Mmmm minties. He gives the shopkeeper £5. How much change does he receive?

Look at this number.

46

Write the number as a Roman numeral.

Look at this Roman numeral.

LXII

Write the Roman numeral as a number.

8/ What did you learn?

What did you learn?	Top Tips

9/ I'm still not sure about…..

Week 2 – Multiplication and Division

Multiplication

product

multiplied by

times

increased by   of

each

area   multiplied

factor

twice

multiple

per

as much

1/Mental warm up: Your number is 321

How many of all of these questions can you do 15 minutes? Set the timer.
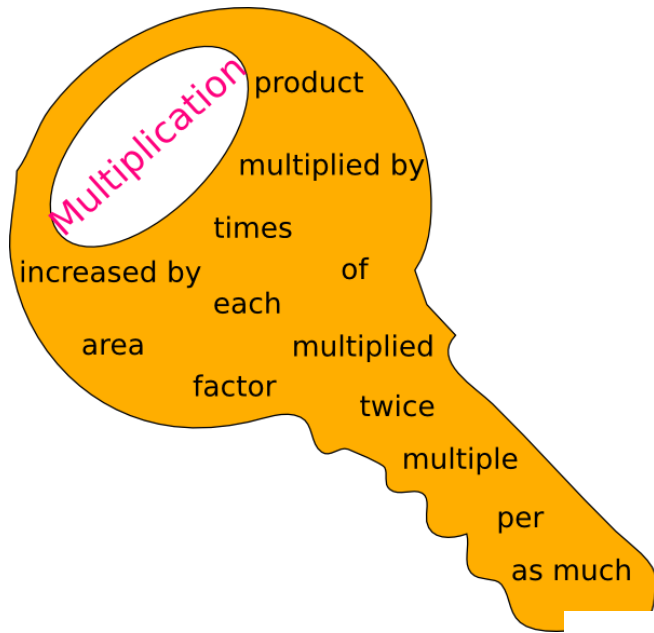
1. **Round to the nearest 10**
2. **Round to the nearest 100**
3. **Multiply by 10**
4. **Multiply by 100**
5. **Double the amount**
6. **Is it odd or even?**
7. **Divide by 10**
8. **Divide by 100**
9. **Multiply by 5**
10. **Add 1000**
11. **What does the digit 2 represent?**
12. **What does the digit 3 represent?**
13. **Share between 3 people**

Challenge:

1. 32 x 4 =
2. 45 x 6 =
3. 247 x 2 =
4. 28 ÷ 4 =
5. 500 x 4 =
6. Half 468

Division

Means sharing

2/Did you know?

https://www.bbc.com/bitesize/topics/z36tyrd - multiplying and dividing

Key Vocabulary:

Multiplication and division
Multiplication
Multiply
multiplied by
multiple, factor
groups of
times
product once, twice, three times … ten times
repeated addition
division
dividing, divide, divided by, divided into left,
left over, remainder
grouping
sharing, share, share equally
one each, two each, three each … ten each
group in pairs, threes … tens
equal groups of
doubling
halving
array
row, column
number patterns
multiplication table
multiplication fact
division fact
inverse
square, squared
cube, cubed

1. 60 x 3 =
Roughly what answer do you expect to get? How did you reach that estimate?"

Do you expect your answer to be less than or greater than your estimate? Why?

2. 7 x 50 = 350 (Is this correct?) How do you know?

3. 40 x 6 = 320 (Is this correct?) How do you know?

4. The product is 40, what two numbers could have been multiplied together?

5. How many division facts can you make using what you know about 24 (or 20, 30…). How did you work out the division facts?

6. "Do all divisions have remainders?" "Make up some division questions that have a remainder of 1" "How did you do it?" "Make up some division questions that have no remainder. How did you do this? Why do they not have a remainder?"

4/ Try this!

1. Complete the calculations below using the column method and bus stop method
- 43 x 5 =
- 362 x 4 =
- 726 x 3 =
- 342 ÷ 2 =
- 564 ÷ 3 =

Complete the calculations.

12 × 5 = ☐   5 × 12 = ☐   48 ÷ 12 = ☐   84 ÷ 12 = ☐

12 × ☐ = 120   12 × ☐ = 132   ☐ ÷ 12 = 8   ☐ = 9 × 12

There are 11 players on a football team.
7 teams take part in a tournament.
How many players are there altogether in the tournament?

5/ Word problems

1. Some children share 12 strawberries. Each child gets 3 strawberries. How many children are there?

2. Tulips are sold in bunches of 5. Randle buys 30 tulips. How many bunches does he buy?

3. David is giving a birthday party. He has invited nine children. He will give each child a goody-bag containing ten marbles. How many marbles will he give away in total?

4. A large bag of frozen chips costs 30p. How much do 3 large bags cost?

5. Kate's teacher has asked her to arrange 40 chairs in 5 equal rows in the hall. How many chairs will there be in each row?

6. Harry plants 3 trees in rows of 4. How many trees does he plant?

7. Jill saves 10p every week. She wants to buy a new game costing 60p. How many weeks is it before she can afford to buy the game?

6/ Maths Mastery

Place one of these symbols in the circle to make the number sentence correct:
>, < or =.

Explain your reasoning.

8×50 ◯ 50×8

8×50 ◯ 80×5

300×3 ◯ 5×200

Roger is laying tiles.
He has 84 tiles altogether.
How many complete rows of tiles can he make?

Spot the mistake

Alex and Dexter have both completed the same multiplication.

Alex

	H	T	O
	2	3	4
×			6
1	2	0	4
	2	2	

Dexter

	H	T	O
	2	3	4
×			6
1	4	0	4
	2	2	

Who has the correct answer?
What mistake has been made by one of the children?

Use a column method to calculate the following:

123×3 324×4 234×8

Find the missing digits.

```
  2 □
×    8
1 7 6
```

```
  2 □
×  □
1 1 2
```

```
1 □ 4
×   □
7 3 6
```

7/ Test based questions

$5 \times 70 =$ ▢

22. Write the answer.

$$84 \div 7 =$$

3. Write in the missing number.

$4 \times$ ▢ $= 200$

$160 \div$ ▢ $= 8$

1. Calculate $56 \div 4$

▢

6. There are 5 ice-creams in a box.
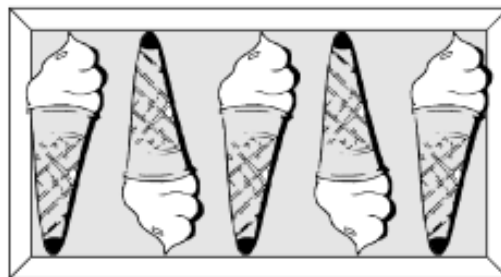
Alex buys 7 boxes of ice-creams.

How many ice-creams does she buy altogether?

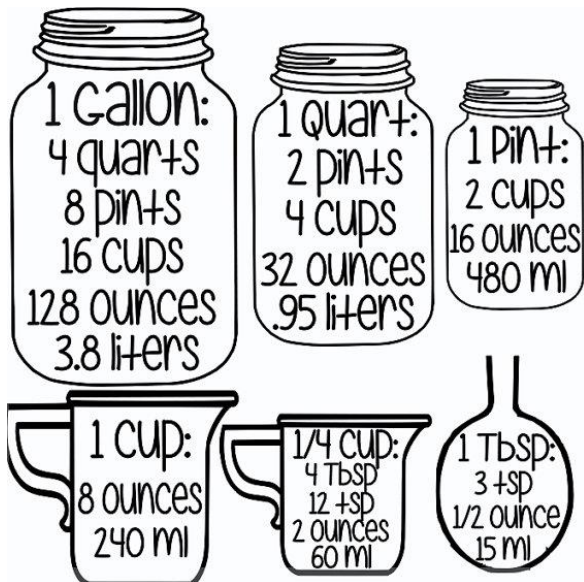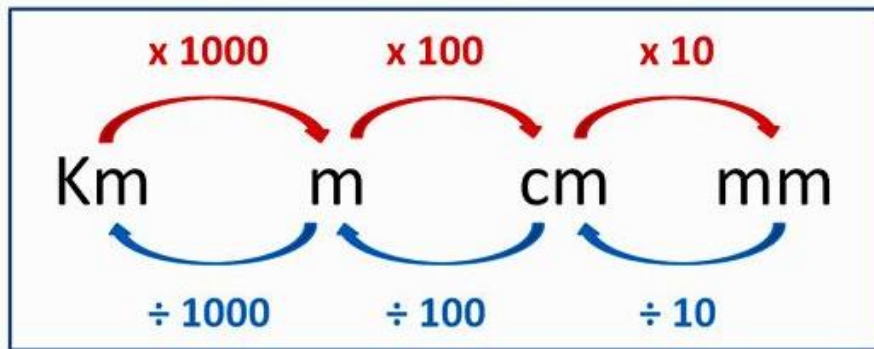**14.** Write what the missing numbers could be.

▢ $\times$ ▢ $= 150$

21. Calculate 549×6

▢

8/ What did you learn?

What did you learn?	Top Tips

9/ I'm still not sure about…..

Week 3 – Converting measurements

x 1000   x 100   x 10

Km   m   cm   mm

÷ 1000   ÷ 100   ÷ 10

1 Gallon:
4 quarts
8 pints
16 cups
128 ounces
3.8 liters

1 Quart:
2 pints
4 cups
32 ounces
.95 liters

1 Pint:
2 cups
16 ounces
480 ml

1 Cup:
8 ounces
240 ml

1/4 Cup:
4 Tbsp
12 tsp
2 ounces
60 ml

1 Tbsp:
3 tsp
1/2 ounce
15 ml

inches

yard

tablespoon   cup   pint   quart   gallon

ounce   pound
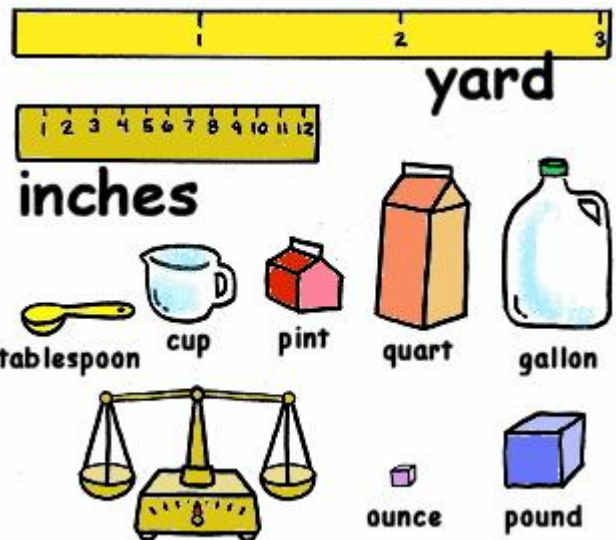
1/Mental warm up: Your number is <u>34</u>

How many of all of these questions can you do 15 minutes? Set the timer.

1.   **Round to the nearest 10**
2.   **Round to the nearest 100**
3.   **Multiply by 10**
4.   **Multiply by 100**
5.   **Double the amount**
6.   **Is it odd or even?**
7.   **Divide by 10**
8.   **Divide by 100**
9.   **Multiply by 5**
10.   **Find ½?**
11.   **What does the digit 3 represent?**
12.   **Find ¼?**

2/ Did you know?

Key vocabulary:

Measurement
measure
measurement
size
compare
unit, standard unit
metric unit
measuring scale, division
guess, estimate
enough, not enough
too much, too little
too many, too few
nearly, close to, about the same as,
approximately
roughly
just over, just under

Length
millimetre, centimetre, metre, kilometre, mile
length, height, width, depth, breadth long,
short, tall
high, low
wide, narrow
thick, thin
longer, shorter, taller, higher … and so on
longest
shortest, tallest, highest … and so on far,
further, furthest, near, close distance apart …
between … to … from edge, perimeter
area, covers
square centimetre (cm2)
ruler
metre stick, tape measure

Weight
mass: big, bigger, small, smaller
weight: heavy/light, heavier/lighter, heaviest/
lightest
kilogram, half kilogram, gram
weigh, weighs, balances
heavy, light
heavier than, lighter than
heaviest, lightest
scales

Capacity and volume
litre, half litre, millilitre
capacity
volume
full
empty
more than
less than
half full
quarter full
holds, contains
container, measuring cylinder

3/ Misconceptions
1. Remember that 100cm = 1 metre
2. If the number is in CM divide the number by 100 to convert to M.
3. If the number is in M multiply by the number by 100 to convert to CM.
4. If the number is in MM multiply by 10 to convert to CM.
5. If the number is in CM divide it by 10 to convert to MM,
6. If the number is KM, multiply it by 1000 to convert to M
7. If the number is in g, divide it by 1000 to convert to kg

4/ Try this!

1. Convert 3m to cm
2. Convert 5.7km to m
3. Convert 45cm to m
4. Convert 2500g to kg
5. Convert 4.6kg to g

6. Write the measurement that matches those in the list.
   Choose the correct measurement from the box below.

   1.5 m =

   0.5 m =

   2.75 m =

   1 cm =

   1.7 cm =

   10 cm =

   12 cm =

   0.5cm =

   1   km =

CHOOSE FROM THESE:
120mm   150 cm   50cm
5 mm   17 mm   1000m

7. A mouse runs <u>once</u> around the edge of a square table.
   Each side of the table measures **2200cm**.

   a)   How far does the mouse run altogether?
   Give your answer in **metres**

Show your working out:

 The mouse runs _____m.

5/ Word problems

1. James is 1.43m tall, and Jodie is 135cm.

How much taller is James than Jodie?

2. 3 pencils are laid in one long line on the table.
   The first is 16cm, the second 155mm, and the third 13cm.
   What is the total length of all 3 pencils, in both cm **and** mm?

3. At the weekend I walked 2.5km.
   My Dad walked 200m further than me.
   How far did he walk?

4. The perimeter of a pentagon is 35cm.
   What is the length of each side, in both cm **and** mm?

6/ Maths Mastery

I have 2 m of ribbon. How many 60 cm lengths can I cut from it?

What is the mass of flour on the scales?
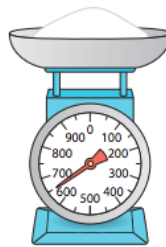
I need $\frac{3}{4}$ kg of flour to make a cake.
How much more flour do I need to add to the scales?
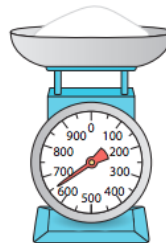
How long is the crayon?
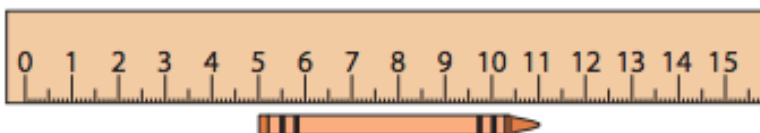
7/ Test based questions

1   Jamie is cooking pasta.
He weighs 350 grams of pasta.
Draw an arrow on the scale to show 350 grams.
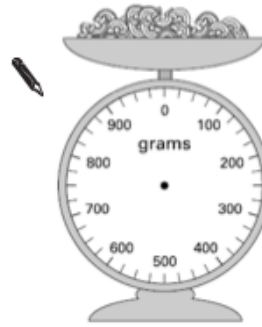
5   Here is a baby's drinking cup.
How many millilitres of water are in the cup?

| | **ml** |
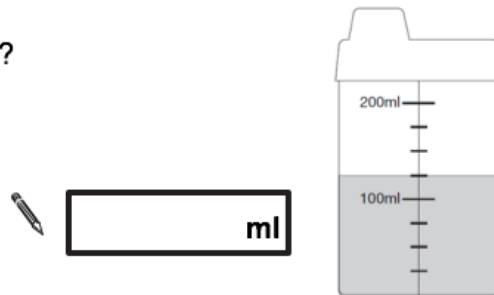
25   Megan wants to fill a bucket with water.
A bucket holds 6 litres.
A jug holds 500 millilitres.

How many jugs of water does Megan need to fill an empty bucket?

Show
your
method

28   This table shows the weight of
some fruits and vegetables.
Complete the table.

	grams	kilograms
potatoes	3500	3.5
apples		1.2
grapes	250	
ginger		0.03

8/ What did you learn?

What did you learn?	Top Tips
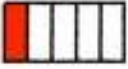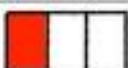
9/ I'm still not sure about…..

Week 4 – Fractions and decimals

1/Mental warm up: Your number is 1460

1. **Round to the nearest 10**
2. **Round to the nearest 100**
3. **Multiply by 10**
4. **Multiply by 100**
5. **Double the amount**
6. **Is it odd or even?**
7. **Divide by 10**
8. **Divide by 100**
9. **Multiply by 3**
10. **Find ½?**
11. **What does the digit 6 represent?**
12. **What does the 1 represent?**
13. **What does the 4 represent?**
14. **Find ¼?**

Fractions, Decimals, & Percents

Fraction	Decimal	Percent	Picture
$\frac{1}{10}$	0.1	10%	
$\frac{1}{5}$	0.2	20%	
$\frac{1}{4}$	0.25	25%	
$\frac{1}{3}$	$0.\overline{33}$	$33.\overline{3}\%$	
$\frac{1}{2}$	0.5	50%	
$\frac{2}{3}$	$0.\overline{66}$	$66.\overline{6}\%$	
$\frac{3}{4}$	0.75	75%	
1	1.00	100%	

Key vocabulary:

2/ Did you know?

Fractions (including decimals)
Fraction
equivalent fraction
mixed number
numerator, denominator
equal part
equal grouping
equal sharing
parts of a whole
half, two halves
one of two equal parts
quarter, two quarters, three quarters one of
four equal parts
one third, two thirds
one of three equal parts
sixths, sevenths, eighths, tenths … hundredths
decimal, decimal fraction, decimal point,
decimal place, decimal equivalent proportion

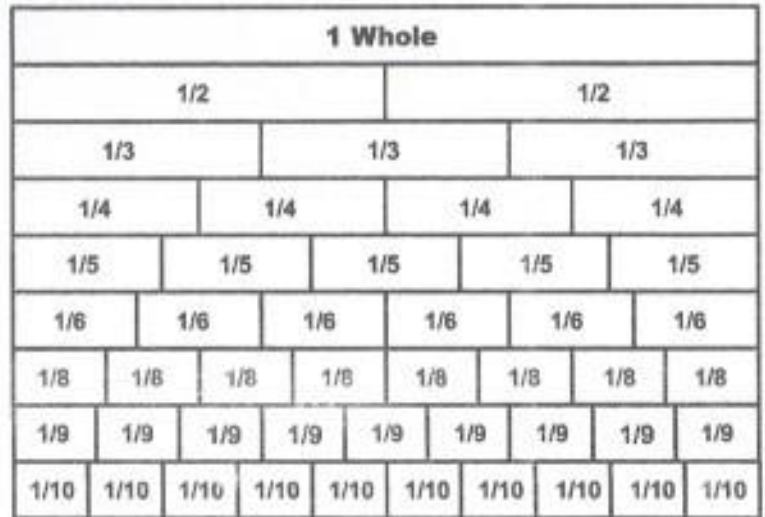https://www.bbc.com/bitesize/topics/zhdwxnb - fractions

https://www.bbc.com/bitesize/articles/zwjwgdm - equivalent fractions

https://www.bbc.com/bitesize/articles/zsbd7p3 - decimals

3/ Misconceptions

1. Tell me some fractions that are equivalent to ½. How do you know? Are there others?
2. Repeat for fractions like ¼ and ¾, 1/3 and 2/3.
3. a - What numbers/shapes are easy to find a third/quarter/fifth/tenth of? b - Why?
4. a - Which would you rather have 1/3 of £30 or ¼ of £60?
   b - Why?
5. a- What can you tell me about the digit 7 in each of these numbers: 3.7, 7.3, 0.37, 7.07?
   b - What if I put a £ sign in front of each of them?
6. Convince me that
   a. a half is bigger than a quarter (draw a pizza or cake to help you!)
   b. a half is the same as two quarters
7. Give me two equivalent fractions. How do you know they are equivalent?

The fraction wall helps us understand equivalent fractions

1 Whole									
1/2					1/2				
1/3			1/3			1/3			
1/4		1/4		1/4			1/4		
1/5		1/5		1/5		1/5		1/5	
1/6		1/6		1/6		1/6		1/6	1/6
1/8	1/8	1/8	1/8	1/8	1/8	1/8		1/8	
1/9	1/9	1/9	1/9	1/9	1/9	1/9	1/9	1/9	
1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10

4/ Try this!

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

1. | 2.1 | 1.2 | 3.2 | 2.3 |

2. | 3.4 | 7.3 | 3.1 | 3.7 |

3. | 4.5 | 6.4 | 4.6 | 5.4 |

Place these fractions into the correct boxes below.

$\frac{3}{12}$ $\frac{3}{20}$ $\frac{5}{8}$ $\frac{10}{40}$ $\frac{4}{16}$

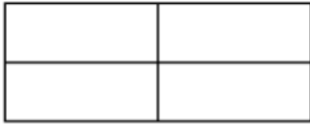$\frac{1}{5}$ $\frac{2}{9}$ $\frac{2}{3}$ $\frac{2}{8}$ $\frac{1}{3}$

Less than a quarter	Equal to a quarter	More than a quarter

equivalent fractions.

$\frac{1}{2}$ and $\frac{2}{4}$ are equivalent fractions.

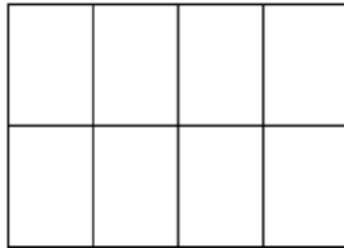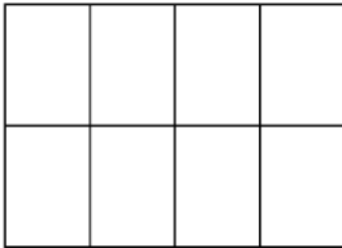1. Shade $\frac{1}{2}$ of this rectangle.   Shade $\frac{2}{4}$ of this rectangle, making the same pattern.

This shows that $\frac{1}{2}$ and $\frac{2}{4}$ are equivalent.
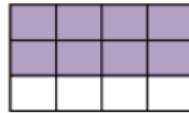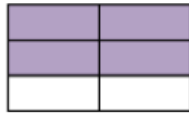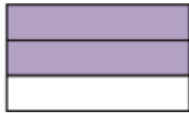
2. Shade $\frac{3}{4}$ of this rectangle.   Shade $\frac{6}{8}$ of this rectangle.

More equivalent fractions
Maths worksheets from urbrainy.com

These diagrams show three equivalent fractions. Write the missing values in the boxes below.

$$\frac{2}{3} \qquad = \qquad \frac{4}{\boxed{}} \qquad = \qquad \frac{\boxed{}}{12}$$

2. Put a tick next to the **three** numbers that are equivalent to $\frac{1}{4}$

$\frac{25}{100}$ 0.2   0.25 $\frac{2}{5}$ $\frac{5}{20}$

☐   ☐   ☐   ☐   ☐   Tick **three**.

5/ Word problems

4) John says that $\frac{2}{10} + \frac{3}{10}$ is equal to a half. Is he correct? Explain your ideas.
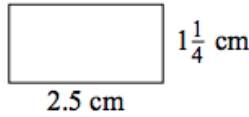
....

a) If I were to give you £6.40, you would have £25.80.
How much do you have?

Answer: . . . .

b) After gathering another $1\frac{2}{5}$ kg of mushrooms, I have $2\frac{1}{5}$ kg of mushrooms altogether. How many kg of mushrooms did I have at first?

Answer: . . . .

c) What length is the perimeter of this rectangle?

$1\frac{1}{4}$ cm

2.5 cm

Answer: . . . .

6/ Maths Mastery

Shade in 0·7 of this rectangle.

True or false?

Explain why.

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{2}$ $\frac{1}{4}$

The shape is divided into 4 equal parts. Do you agree?

Explain why.

Hamsa says the diagrams below show that $\frac{1}{4} > \frac{1}{2}$.
Do you agree?

Explain why.
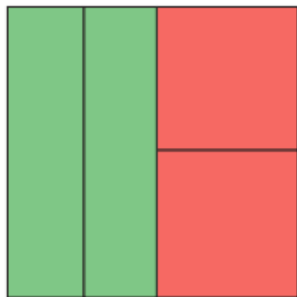
Draw diagrams to show two fractions that are equivalent to $\frac{2}{8}$.

Put these fractions on the number line:

$\frac{2}{3}, \frac{1}{2}, \frac{3}{6}, \frac{4}{9}$

0   1

Put these fractions on the number line:

$\frac{4}{5}, \frac{7}{10}, \frac{5}{10}, \frac{2}{5}$

0   1

7/ Test based questions

2) Draw a line to match each fraction to its equivalent decimal. One has been done for you.

$\frac{1}{2}$	0.1
$\frac{1}{10}$	0.5
$\frac{1}{4}$	0.35
$\frac{35}{100}$	0.75
$\frac{3}{4}$	0.25

3) Use these digits to make a number between 3 and 5. For example: 3.41

3	4	1

Can you make 3 more?

....

....

....

a) Use these fraction wheels to write the equivalent fractions below:

$$\frac{2}{6} = \underline{\quad} = \underline{\quad} = \underline{\quad}$$

$$\frac{16}{24} = \underline{\quad} = \underline{\quad} = \underline{\quad}$$

$$\frac{1}{8} = \underline{\quad}$$
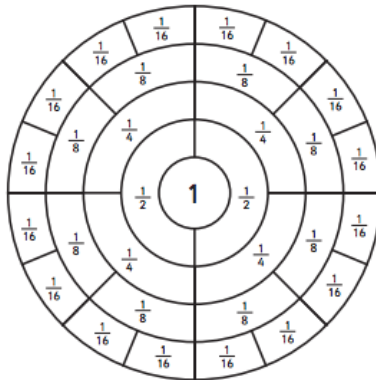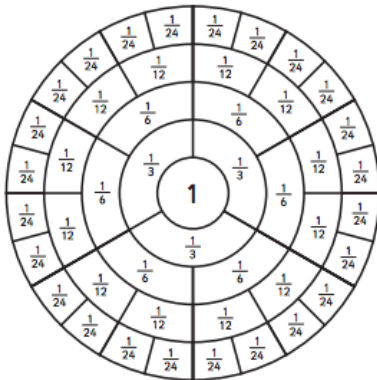
$$\frac{3}{4} = \underline{\quad} = \underline{\quad}$$

2. Count up and down in hundredths.

Complete these sequences of numbers:

4.06	4.07	4.08	☐	☐	☐
$\frac{89}{100}$	$\frac{88}{100}$	$\frac{87}{100}$	☐	☐	☐
5.03	5.02	5.01	☐	☐	☐
$\frac{8}{100}$	$\frac{9}{100}$	$\frac{10}{100}$	☐	☐	☐

4. Add and subtract fractions with the same denominator.

$$\frac{5}{12} + \frac{5}{12} = \boxed{}$$ $$\frac{7}{10} + \frac{2}{10} = \boxed{}$$

$$\frac{4}{5} - \frac{1}{5} = \boxed{}$$ $$\frac{7}{9} - \frac{3}{9} = \boxed{}$$

• •

5. Recognise and write decimal equivalents of any number of tenths or hundreds.

Fill in the missing boxes:

fraction	decimal
$\frac{2}{10}$	
	0.3
$\frac{7}{100}$	
	0.01
$\frac{13}{100}$	
	0.77

8/ What did you learn?

What did you learn?	Top Tips

9/ I'm still not sure about…..

Week 5 – Money and time

1/Mental warm up: Your number is 683

How many of all of these questions can you do 15 minutes? Set the timer.

1. **Round to the nearest 10**
2. **Round to the nearest 100**
3. **Multiply by 10**
4. **Multiply by 100**
5. **Double the amount**
6. **Is it odd or even?**

7. **Divide by 10**
8. **Divide by 100**
9. **Multiply by 4**
10. **Find ½?**
11. **What does the digit 6 represent?**
12. **What does the 3 represent?**
13. **What does the 8 represent?**
14. **Find ¼?**

2/ Did you know?

https://www.bbc.com/bitesize/topics/z8yv4wx - money

https://www.bbc.com/bitesize/topics/zkfycdm - time

Key Vocabulary:

Money
money
coin
penny, pence, pound
price, cost
buy, bought, sell, sold
spend, spent
pay
change
costs more
cheap, costs less, cheaper costs the same as
how much …?
how many …?
total

Time

time
days of the week, Monday, Tuesday …
months of the year (January, February ...)
seasons: spring, summer, autumn, winter
day, week, weekend, fortnight, month,
year, leap year, century, millennium
birthday, holiday
morning, afternoon, evening, night
bedtime, dinner time, playtime
today, yesterday, tomorrow
before, after
earlier, later
next, first, last
noon, midnight
calendar, date, date of birth
now, soon, early, late, earliest, latest quick,
quicker, quickest, quickly
slow, slower, slowest, slowly
old, older, oldest
new, newer, newest
takes longer, takes less time
how long ago?
how long will it be to …?
how long will it take to …?
how often?
always, never, often, sometimes usually
once, twice
hour, o'clock, half past, quarter past,
quarter to

3/ Misconceptions

Time:
1 hour = 60 minutes
1 minute = 60 seconds

3:30pm = 15:30 = half past 3
1:45pm = 13:45 = quarter to 2

Date:
July 1st 19 = 01.07.19 = 1st July 2019

Money:
Making £1
- 2 x 50 pence coins
- 5 x 20 pence coins
- 10 x 10 pence coins
- 20 x 5 pence coins
- 50 x 2 pence coins
- 100 x 1 pence coins

4/ Try this!

1. Charlotte has 85p in her purse. Which coins could Charlotte have in her purse?
2. Would you rather have, five 50p coins or twelve 20p coins? Explain your answer fully.
3. Ria says 'to covert hours to minutes, I multiply the number of hours by 60' Is she correct? Can you explain why?

5/ Word problems

1. Lewis went to the shop and bought a magazine for £3.80, and some biscuits at £3.50.
   How much does he spend altogether?
2. Mia just loves swimming, and she bought some new goggles at £7.40.
   When she took them to the till, they came up at half price.
   How much did Mia's swimming goggles cost?
3. A One Direction CD costs £8.40, whilst Little Mix's CD costs £5.70.
   How much more does One Direction's CD cost?
4. Josh paid £6.10 for 2 pairs of new football socks.
   How much does each pair cost?

CPA Cinema

Film	Start Time
Monsters University	10:30 am
Wreck-It Ralph	12:45 pm
Brave	3:45 pm
Despicable Me 2	8:00 pm

Remember: am is morning, pm is afternoon

Draw a clock to help you!

1. Brave is 1 ½ hours long. What time will it end?
2. How long is there from the start of Monsters University to the start of Wreck-It Ralph?
3. Despicable Me 2 is 1 ½ hours long. What time will it end?
4. How long is there from the start of Monsters University to the start of Despicable me 2?
5. Monsters University is 1 hour and 40 minutes long. What time will it end?
6. Due to a problem in the cinema, Wreck-It Ralph starts 25 minutes later than expected. What time does it start?

7. Due to a problem in the cinema, Brave starts 20 minutes later than expected. What time does Brave start?

6/ Maths Mastery

£2·60 + ☐ = £5·00

If I buy a sandwich for £2·20 and a drink for 90p, how much change do I get from £5?

Ellie buys 2 pencils. She pays with a £2 coin and gets 70p change.
How much did each pencil cost?

Sophie and Ravi have saved some money. Altogether they have saved £35. Sophie has saved £4 more than Ravi. How much have they each saved?

Sam and Tom share this money equally.
Divide the coins into two equal groups.
Could three friends share the money equally?

20p 50p

20p

10p

Explain your reasoning.

20p 5p 5p
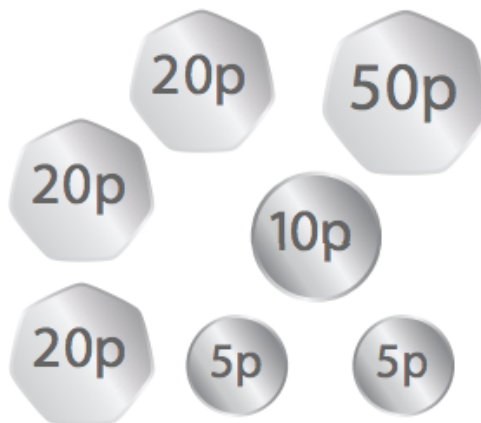
Match the two clocks that show the same time.

3:45

13:20
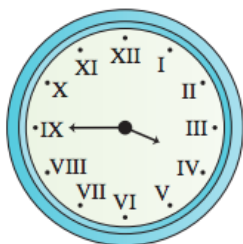
7/ Test based questions

1 Match each clock to the correct time.

One has been done for you.

1:45

half past ten

ten to seven

9:10

2 A clock shows this time twice a day.
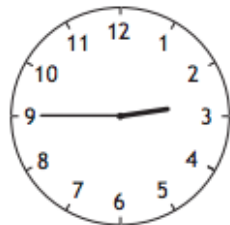
Tick the two digital clocks that show this time.

03:45   02:45   09:45

21:45   14:45

5 Circle the time that is 30 minutes **before** midnight.

12:30 am   12:30 pm

11:30 am   11:30 pm   3 am

6 The children at Farmfield School are collecting money for charity.

Their target is to collect £360

So far they have collected £57.73

How much **more** money do they need to reach their target?

£

1

These are some prices in a fish and chip shop.

Fish	£2.30	Peas	35p
Sausage	£1.80	Curry sauce	40p
Chips (small bag)	60p	Bread roll	30p
Chips (large bag)	90p	Pickled onion	28p

Alfie buys one fish, a large bag of chips and a pickled onion.

How much does he pay?

£

3

These are the prices of sandwiches, drinks and fruit.

Sandwiches		Drinks		Fruit	
cheese	£1.45	milk	55p	apple	15p
tuna	£1.70	cola	45p	pear	20p
salad	£1.20	juice	65p	melon	25p

Shereen buys a **tuna** sandwich, **milk** and a **pear**.
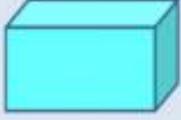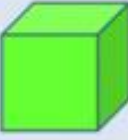
How much does she pay?

8/ What did you learn?

What did you learn?	Top Tips

9/ I'm still not sure about.....

Week 6 – Properties of shapes

Properties of 3D shapes

Cone	Sphere	Tetrahedron	Cuboid
2 Faces	1 Face	4 Faces	6 Faces
1 Edge	1 Edge	6 Edges	12 Edges
1 Vertex	0 Vertices	4 Vertices	8 Vertices

Cylinder	Cube	Triangular Prism	Square-based pyramid
3 Faces	6 Faces	5 Faces	5 Faces
2 Edges	12 Edges	9 Edges	8 Edges
0 Vertices	8 Vertices	6 Vertices	5 Vertices

1/Mental warm up: Your number is <u>2408</u>

1. Round to the nearest 10
2. Round to the nearest 100
3. Multiply by 10
4. Multiply by 100
5. Double the amount
6. Is it odd or even?
7. Divide by 10
8. Divide by 100
9. Multiply by 4
10. Find ½?
11. What does the digit 8 represent?
12. What does the 4 represent?
13. What does the 0 represent?
14. What does the 2 represent?
15. Find ¼?

2/ Did you know?

https://www.bbc.com/bitesize/topics/zvmxsbk - 2D shapes

https://www.bbc.com/bitesize/topics/zt7xk2p - 3D shapes

https://www.bbc.com/bitesize/topics/zjbg87h - area and volume

Key Vocabulary:

GEOMETRY
Properties of shape
shape, pattern
flat, line
curved, straight
round
hollow, solid
sort
make, build, construct, draw, sketch
perimeter
centre
surface
angle, right-angled
base, square-based
size bigger, larger, smaller
symmetry, symmetrical, symmetrical
pattern line symmetry
reflect, reflection
pattern, repeating pattern
match
regular, irregular

2-D shape
2-D, two-dimensional
corner, side
point, pointed
rectangle (including square), rectangular, oblong
circle, circular
triangle, triangular
equilateral triangle, isosceles triangle, scalene triangle
pentagon, pentagonal
hexagon, hexagonal
heptagon
octagon, octagonal
quadrilateral
parallelogram, rhombus, trapezium
polygon
right-angled
parallel, perpendicular

3-D shape
3-D, three-dimensional
face, edge, vertex, vertices
cube, cuboid
pyramid
sphere, hemisphere, spherical
cone cylinder, cylindrical
prism, triangular prism
tetrahedron, polyhedron

3/ Misconceptions

1. You need to add the lengths of every side together to find the perimeter.
2. The area of a rectangle and square is length x width (L x W)
3. How would you check if two lines are parallel/perpendicular?
4. Tell me some facts about rectangles OR Give me some instructions to draw a rectangle.
5. What is the same about a square and a rectangle? What might be different?
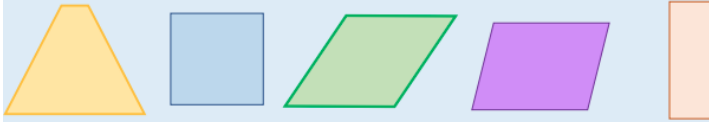6. Is it possible for a right angle to have only three right angles? Why?

4/ Try this!

1. Can you list all of the properties of a square?
2. What does quadrilateral mean?
3. Can you list all of the properties of a rectangle?
4. Can you list all the properties of a cube?
5. What does parallel mean?
6. What does perpendicular mean?

Use the criteria to describe the shapes.

four sides | polygon | four equal sides | four right angles

one pair of parallel sides | two pairs of parallel sides

Which criteria can be used more than once?

Which shapes share the same criteria?

Can you add any more properties to the shapes?

5/ Word problems

1.   I am a flat shape. I have four sides and four right angles. My sides are the same length. What am I?

2.   I am a flat shape. I have five sides and I have five angles. What am I?

3.   I am a solid shape. I have no flat faces and I have no edges. What am I?

4.   I am a flat shape. I have eight sides and eight angles. All my sides are the same length.

5.   I am a flat shape. I have three sides and three angles. None of my sides are the same length. What am I?

6. A rectangular shop in the mall is 10 metres long and 5 metres wide.

    a – What is its area?

    b – What is its perimeter?

7. A square barn has sides that are 8 metres long. What is the barn's area?

6/ Maths Mastery

Can you draw a triangle with:
- 1 right angle?
- 2 right angles?

Can you draw a quadrilateral with:
- 1 right angle?
- 2 right angles?
- 5 right angles?
- No right angle?

If some of these are impossible, can you explain why?

Below are five quadrilaterals: a rectangle, a rhombus, a square, a parallelogram and an unnamed quadrilateral.

Write the names of each of the quadrilaterals.

Draw lines from each shape to match the properties described in the boxes below.
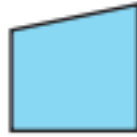
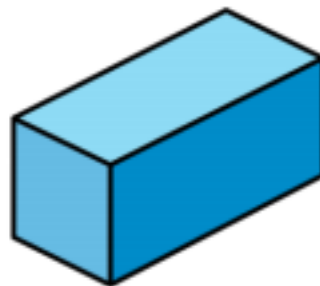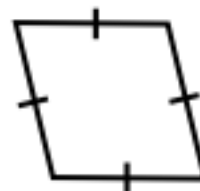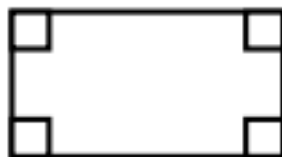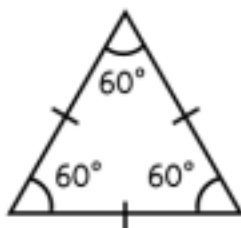| All sides equal | Has an acute angle | Opposite sides are of equal length | All 4 angles are equal | Has an obtuse angle |

7 Complete the sentences.

A cuboid has _____ faces.
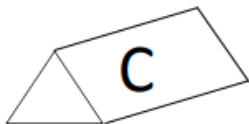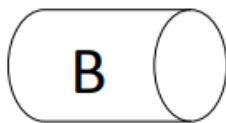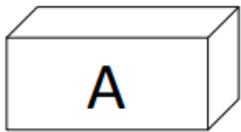
A cuboid has _____ edges.

A cuboid has _____ vertices.

8 For each shape, state whether it is regular or irregular.

60°

60°   60°

_____   _____   _____
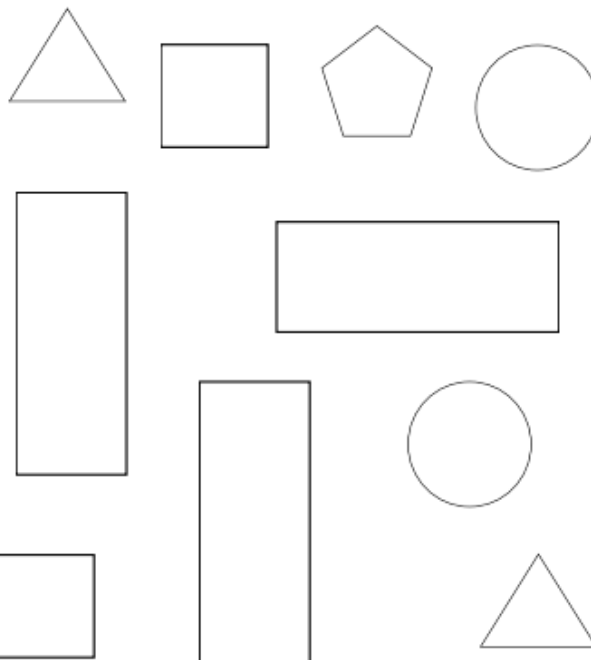
7/ Test based questions

23. Look at these three shapes:

Now complete this table by writing YES or NO in each box.

	The shape has more than three faces	The shape has more than six vertices
A		
B		
C		

17. John wants to make a triangular prism. He has been given these shapes to cut out.

Tick the ones he needs to cut out to make his triangular prism:

- A rectangular rugby pitch has sides that are 12m and 9m long. What is the area of the field?
- A square room has sides of 4m and 3m. What is the area of the floor?

Complete the table for the area of rectangles:

Length	Width	Area
2cm	8cm	
3m		21m²
	14mm	140mm²
		50km²

Complete the table for the perimeters of rectangles:

Length	Width	Perimeter
2cm	8cm	
3m		22m
	14mm	32mm
		50km

8/ What did you learn?

What did you learn?	Top Tips

9/ I'm still not sure about…..

Mental Maths Questions

For these questions, give 5 seconds to answer each question:

1. What is two thousand subtract three?

2. What is one third of twenty-one?

3. Divide forty-nine by seven.

4. What is seven hundred and twenty-nine rounded to the nearest ten?

5. How many centimetres are there in half a metre?

6. What is eight times three?

7. What is seventeen multiplied by one hundred?

8. What is nineteen take away eight?

9. What is sixty plus fifty?

10. What is double twenty-one?

For these questions, give 10 seconds to answer each question:

11. How many faces does a cuboid have?

12. Add together eight, seven and nine.

13. If you buy a pear costing 40p with a £1 coin, what change do you get?

14. What do you add to fifty-five to make one hundred?

15. A rectangle has two sides of 4cm and two sides of 6cm. What is its perimeter?

16. What is twenty-four subtract seventeen?

17. I have a bag of forty sweets. Ten are red. What fraction are red?

18. If I have £1, how many chocolate bars costing 20p can I buy?

19. I have a litre of water. I pour out 250ml. How much water do I have left?

20. I have three boxes, each containing 40 cartons of orange juice. How many cartons of orange juice do I have altogether?

Multiplication Grid

1	2	3	4	5	6	7	8	9	10	11	12
2				10							
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											