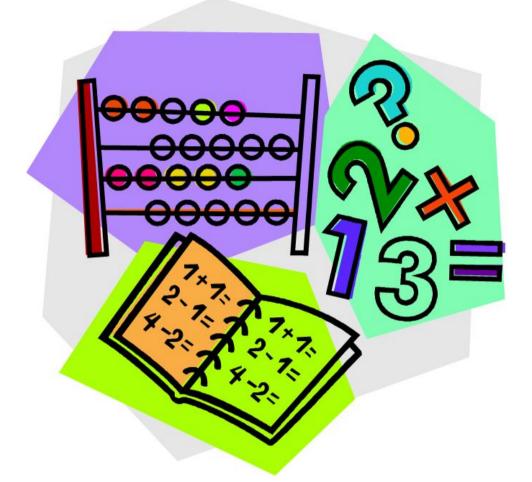
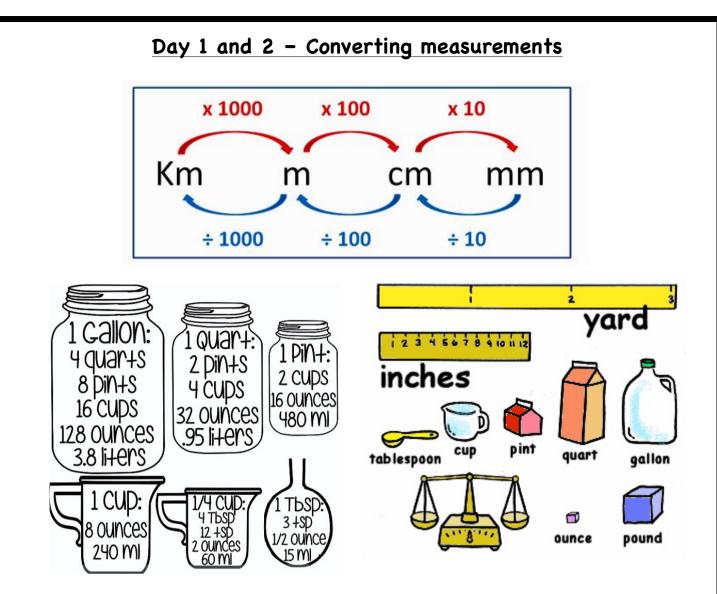
Maths Revision Booklet



Cranford Park Academy

Timetable

Day	Mathematics Focus		
Day 1 and 2	Measurements		
Day 3 and 4	Fraction and decimals		
Day 5 and 6	Money and Time		
Day 7 and 8	Properties of shape		



1/Mental warm up: Your number is 34

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 ¹/₄?

2/ Did you know?

https://www.bbc.com/bitesize/topics/zcpnb9q - measurement

https://www.bbc.com/bitesize/clips/z8487ty - measurement of length

https://www.bbc.com/bitesize/topics/z4nsgk7 - length and distance

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

<u>Weight</u>

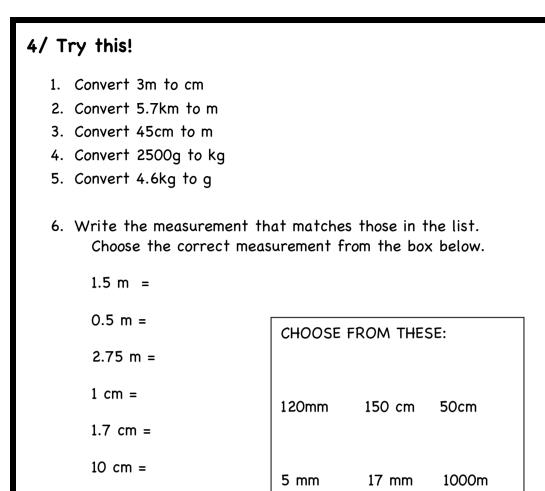
mass: big, bigger, small, smaller weight: heavy/light, heavier/lighter, heaviest/ lightest kilogram, half kilogram, gram weigh, weighs, balances heavy, light heavier than, lighter than heaviest, lightest scales

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



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

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

Show your working out:

12 cm =

0.5 cm =

1 km =

The mouse runs _____m.

5/ Word problems

- James is 1.43m tall, and Jodie is 135cm. How much taller is James than Jodie?
- 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?
- At the weekend I walked 2.5km.
 My Dad walked 200m further than me.
 How far did he walk?
- 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?

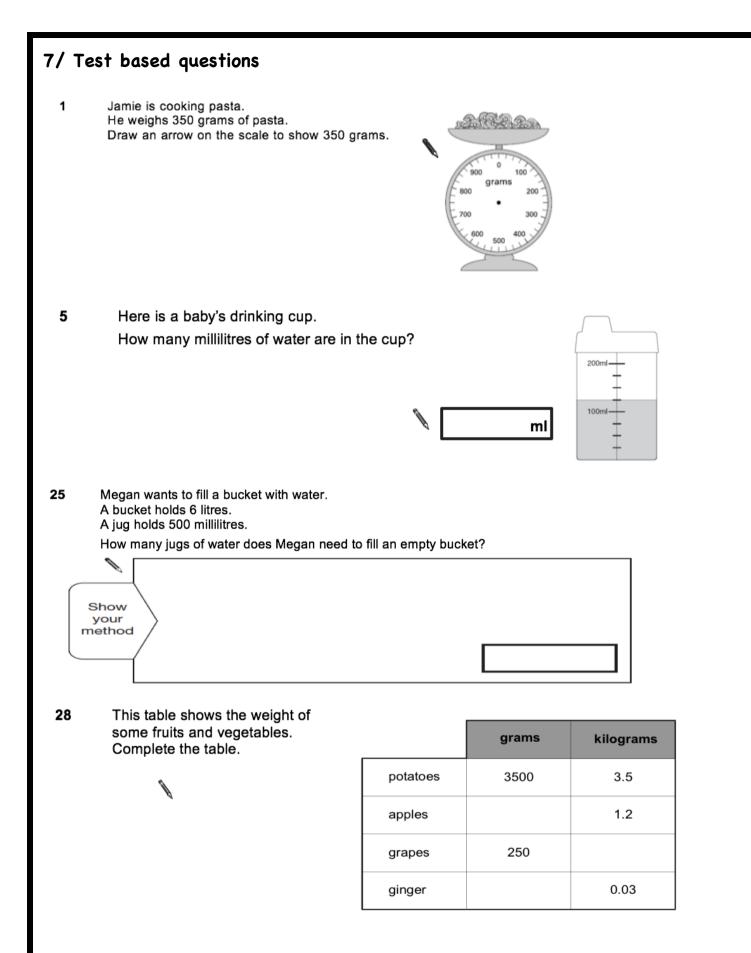


I need $\frac{3}{4}$ kg of flour to make a cake. How much more flour do I need to add to the scales?



How long is the crayon?





8/ What did you learn?

What did you learn?	Top Tips	

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

Day 3 and 4 Fractions and decimals

1/Mental warm up: Your number is <u>1460</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 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 ¹/₄?

Key vocabulary:

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

Fractions, Decimals, & Percents

Fraction	Decimal	Percent	Picture
$\frac{1}{10}$	0.1	10%	
<u>1</u> 5	0.2	2.0%	
$\frac{1}{4}$	0.25	25%	
$\frac{1}{3}$	0.33	33.3%	
$\frac{1}{2}$	0.5	50%	
<u>2</u> 3	0.66	66.6%	
3 4	0.75	75%	
1	1.00	100%	

2/ Did you know?

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

<u>https://www.bbc.com/bitesize/articles/zwjwgdm</u> equivalent fractions

<u>https://www.bbc.com/bitesize/articles/zsbd7p3</u> decimals

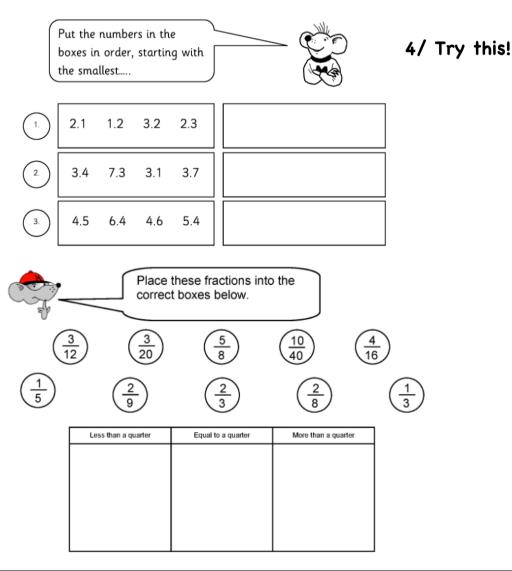
3/ Misconceptions

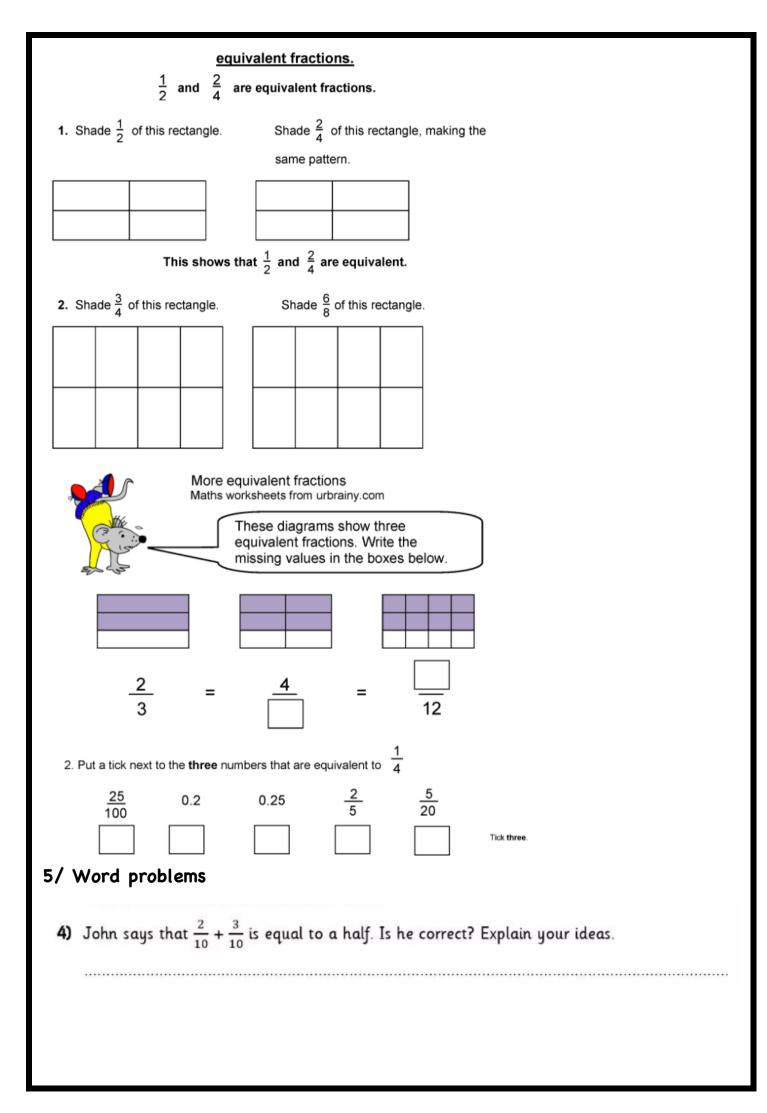
- Tell me some fractions that are equivalent to ½. How do you know? Are there others?
- Repeat for fractions like ¼ and ¾, 1/3 and 2/3.
- 3. a What numbers/shapes are easy to find a third/quarter/fifth/tenth of?
 b Why?
- 4. a Which would you rather have 1/3 of £30 or ¼ of £60?
 b - Why?

The fraction wall helps us understand equivalent fractions

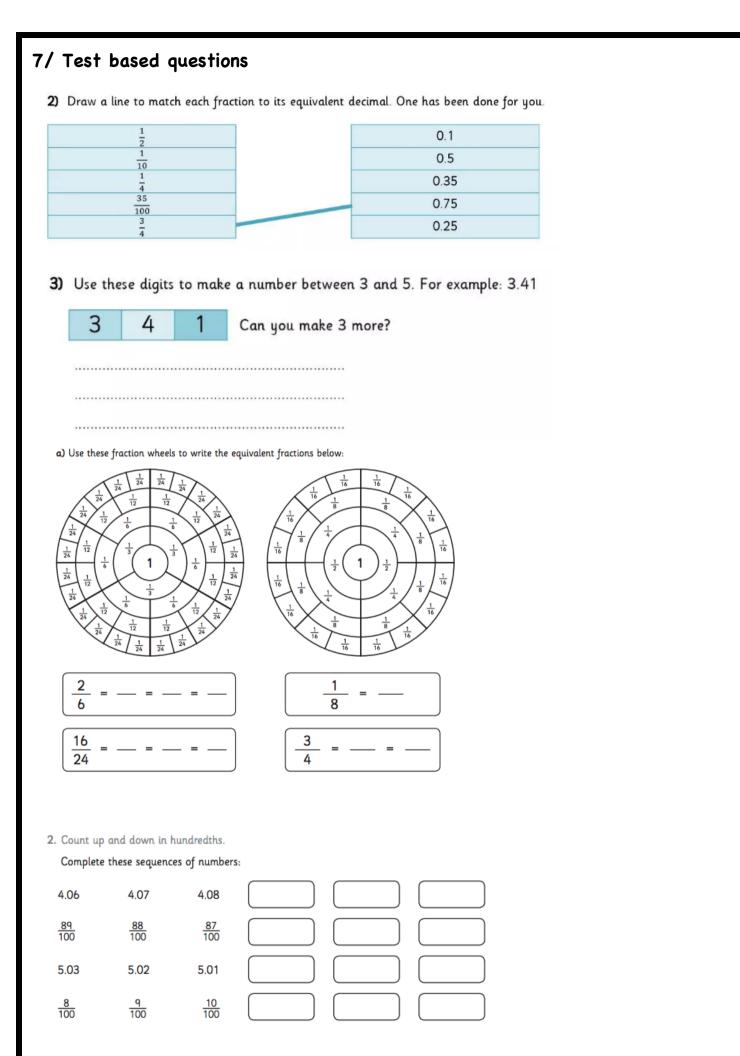
				1 WI	hole				
		1/2					1/2	2	
	1/3			1	3			1/3	
1	/4		1/4			1/4		1/4	
1/	5	1/	5	1	5	-	1/5	1	/5
1/6		1/6		1/6	1/6		1/6	1	/6
1/8	1/8	1	/8	1/8	1/8	1/	8	1/8	1/8
1/9	1/9	1/9	1/	9 1	/9 1	1/9	1/9	1/9	1/9
1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/10

- 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 \pounds 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?

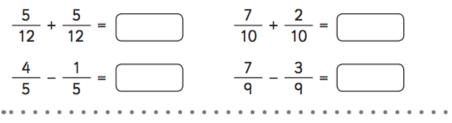




a)	If I were to give you £6.40, you would h How much do you have?	ave £25.8	0.									
	Answer:											
b)	After gathering another $1\frac{2}{5}$ kg of mushr	ooms, I ha	we $2\frac{1}{5}$	kg of n	nushro	oms						
	altogether. How many kg of mushroom	s did I hav	e at firs	st?								
	Answer:											
c)	What length is the perimeter of this recta	angle?			$1\frac{1}{4}$	cm						
	Answer:		2.	.5 cm								
6/	Maths Mastery	Shade	• in 0∙7	of this	rectar	ngle.						
True or	r false?											
Explain												
					sa says ou agre		iagran	ns belo	ow sho	ow tha	$t \frac{1}{4} > \frac{1}{2}$	
	$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{2}$	$\frac{1}{4}$		Expla	in why	у.						
The s	shape is divided into 4 equal parts. [Do you ag	gree?									
	ain why.	w diagrai	_	show	two fr	action	ns that	t are e	quiva	lent to	$D \frac{2}{8}$.	
Put t	these fractions on the number line:											
$\frac{2}{3}, \frac{1}{2},$, ³ / ₆ , ⁴ / ₉ 0						1					
Put t	these fractions on the number line:											
$\frac{4}{5}, \frac{7}{10}$	$\frac{7}{0}, \frac{5}{10}, \frac{2}{5}$						1					



4. Add and subtract fractions with the same denominator.



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

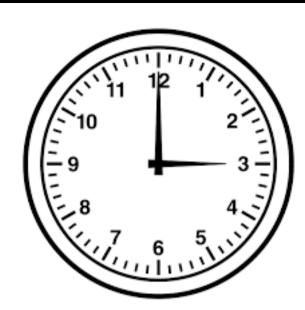
Fill in the missing boxes:

fraction	decimal
<u>2</u> 10	
	0.3
7 100	
	0.01
<u>13</u> 100	
	0.77

8/ What did you learn?

What did you learn?	Top Tips	

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



- 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 ¹/₄?

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

Day 5 and 6 - 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?



<u>Time</u> 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 \text{ hour} = 60 \text{ minutes}
1 \text{ minute} = 60 \text{ seconds}
3:30pm = 15:30 = half past 3
1:45pm = 13:45 = quarter to 2
Date:
July 1^{st} 19 = 01.07.19 = 1^{st} 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!
```

- 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.
- 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?
- 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?
- A One Direction CD costs £8.40, whilst Little Mix's CD costs £5.70. How much more does One Direction's CD cost?
- Josh paid £6.10 for 2 pairs of new football socks. How much does each pair cost?

<u>CPA Cinema</u>

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 $\frac{1}{2}$ 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 $\frac{1}{2}$ 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

 $\pounds 2.60 + = \pounds 5.00$

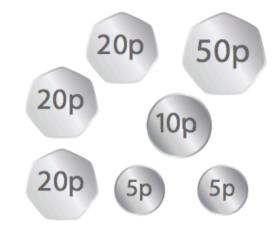
If I buy a sandwich for $\pounds 2.20$ and a drink for 90p, how much change do I get from $\pounds 5$?

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?

Explain your reasoning.

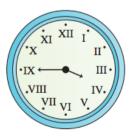


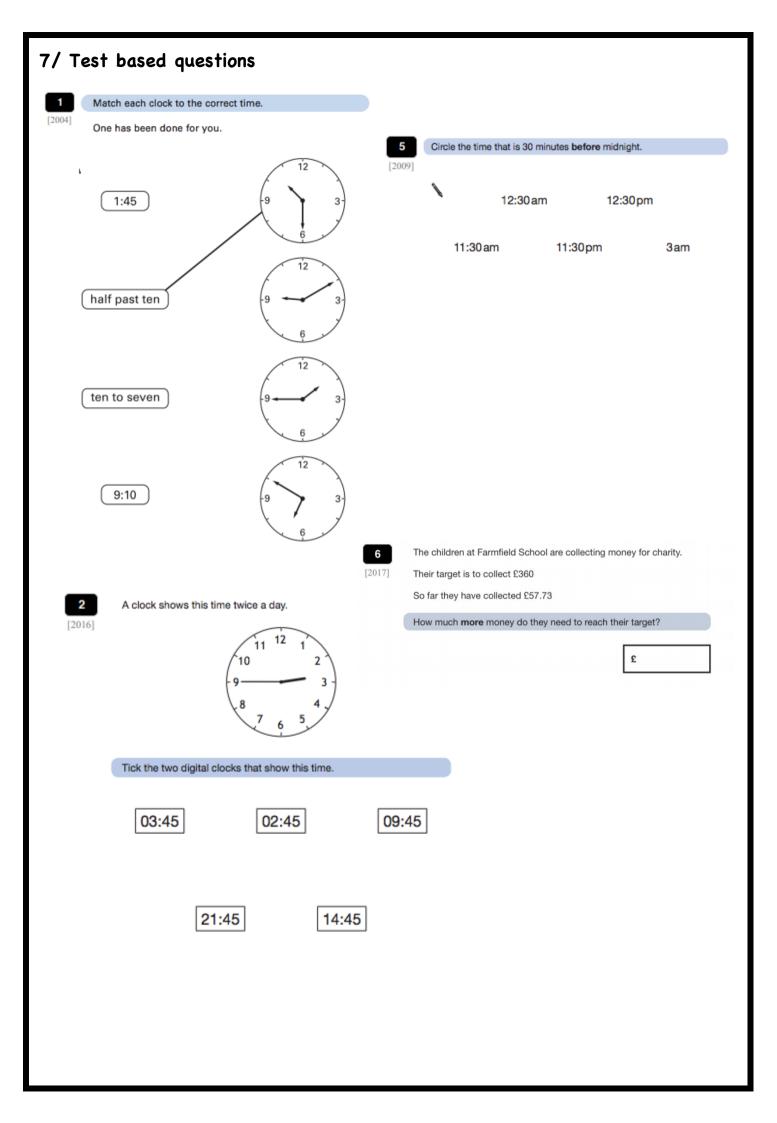
Match the two clocks that show the same time.











These are some prices in a fish and chip shop.

[2015]

1

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?









£

These are the prices of sandwiches, drinks and fruit.

Sandw	viches	Drir	nks	Frui	t
cheese	£1.45	milk	55p	apple	15p
tuna	£1.70	cola	45p	pear	20p
salad	£1.20	juice	65p	melon	25p

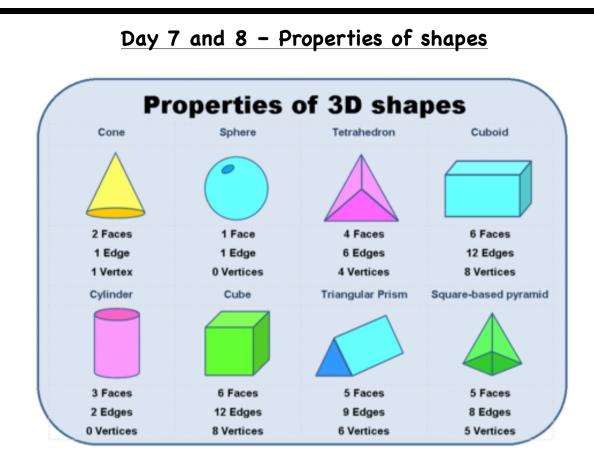
Shereen buys a tuna sandwich, milk and a pear.

How much does she pay?	
	/

8/ What did you learn?

What did you learn?	Top Tips	

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



1/Mental warm up: Your number is 2408

- 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 ¹/₄?

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

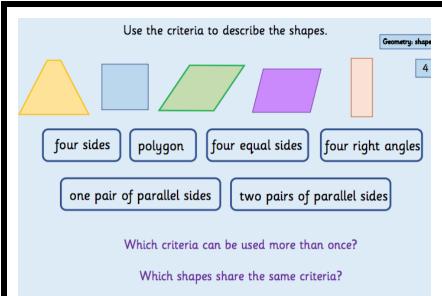
3-D, three-dimensional face, edge, vertex, vertices cube, cuboid pyramid sphere, hemisphere, spherical cone cylinder, cylindrical prism, triangular prism tetrahedron, polyhedron

3/ Misconceptions

- You need to add the lengths of every side together to find the perimeter.
- 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?
- 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!

- 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?



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:

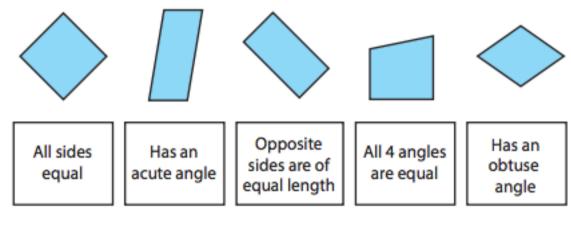
- 1 right angle?
- 2 right angles?
- 5 right angles?
- No right angle?

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.



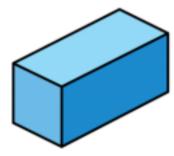


Complete the sentences.

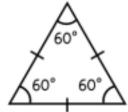
A cuboid has _____ faces.

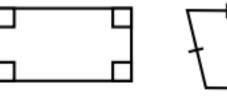
A cuboid has _____ edges.

A cuboid has _____ vertices.



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

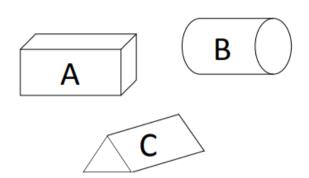






7/ Test based questions

23. Look at these three shapes:

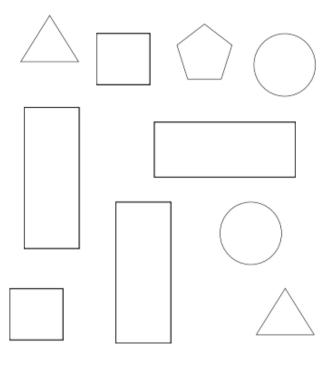


Now complete this table by writing YES or NO in each box.

	The shape has more than three faces	The shape has more than six vertices
Α		
В		
С		

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		21m ²
	14mm	140mm ²
		50km ²

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

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