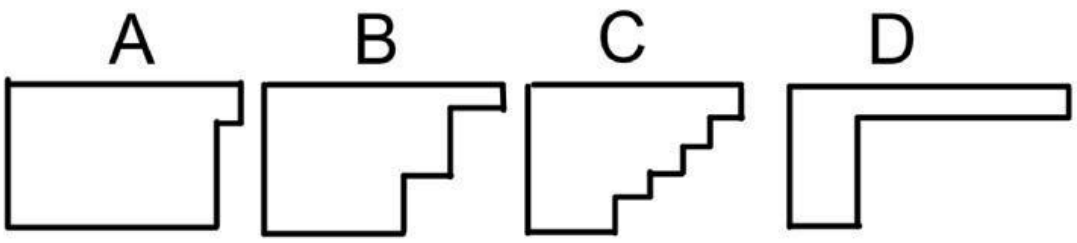
Maths Department

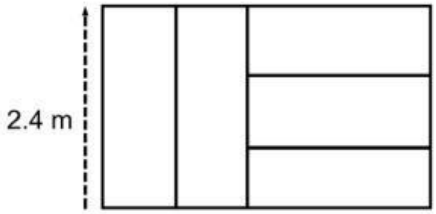
Pre-test Practice Harder Level MK3

Name:_____

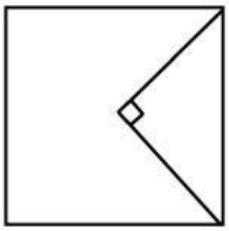
LIVEWORKSHEETS

Question 1				
I cut a regular hexagon into two pieces. Which of these pairs of shapes is it NOT possible to get?				
Two triangles	Two quadrilaterals	A triangle and a pentagon	A triangle and a heptagon	A quadrilateral and a pentagon

Question 2				
Each of the shapes below has width 8cm and height 5cm. Which one has the largest perimeter? 				
A	B	C	D	They are all the same

Question 3				
A flag is in the shape if a rectangle. It is made of five identical rectangles. What is the area of the flag in m^2? 				
2.4	4.8	7.2	9.6	14

LIVEWORKSHEETS

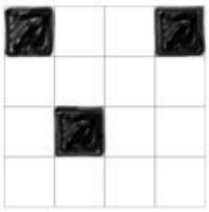
Question 4				
The diagram shows a square with a right-angled isosceles triangle on one side. The area of the triangle is 16cm^2. What is the perimeter of the square in cm? 				
4 cm	8 cm	16 cm	32 cm	64 cm

Question 5				
On a can of paint is written “1 litre of paint will cover 10 m^2 of wall”. How many millimetres thick is the paint?				
Too small to calculate	0.01 mm	0.1 mm	1 mm	10 mm

Question 6				
It takes 400 g of plasticine to make a model of Big Ben. I want to make a smaller model of Big Ben which is exactly half as high. How many grams of plasticine will I need? (It’s not as obvious as you think…)				
50 g	100 g	200 g	400 g	800 g

LIVEWORKSHEETS

Question 7				
A box whose shape is a cube with sides measuring 5 cm is full. It contains 1000 buttons. How many buttons would fit into a cube with sides of 2.5 cm?				
50	125	200	225	500

Question 8				
This pattern has no lines of symmetry. What is the least number of squares to be shaded in order to get a pattern with two lines of symmetry? Lines of symmetry need not be solely horizontal and vertical, of course... 				
2	3	4	5	More than 5

Question 9				
Violet is 1.5 metres (150 cm) tall. One sunny day her shadow is 2 metres long. Her father, who is 180 cm tall, is standing beside her. How long is his shadow?				
2 m	2.03 m	2.3 m	2.04 m	2.4 m

LIVEWORKSHEETS

Question 10				
At home Little Critter has a Super Teddy with lots of clothes. He has: 2 shirts 3 pairs of trousers 4 hats How many different outfits can the teddy be dressed in?				
1	3	9	12	24

Question 11				
The code for St Gradley's Academic is 1966, but due to buying an inferior locking product the doors can be opened by putting in any combination of these digits in any order (for instance 6916) ! How many different arrangements will allow access?				
4	10	12	16	24

Question 12				
The Roman unit of weight, the *libra*, was about 327 grams. One twelfth of a *libra* was an *uncia*. About how many grams were there in an *uncia*?				
12 g	20 g	24 g	27 g	30 g

LIVEWORKSHEETS

Question 13				
Jan and Kym are raising money for charity by putting pennies end to end. So far they have a line of one thousand pennies! Approximately how long is the line of pennies?				
1 m	2.1 m	21 m	100 m	210 m

Question 14				
A Hydra was a mythical creature with nine heads. Every time you cut off a head, two would grow in its place. The famous hero Mathemagicus cuts off three heads. Allowing for regrowth, how many heads does the Hydra have now?				
6	12	15	18	21

Question 15				
?thgie dna neves ,xis ,evif ,ruof fo naem eht si tahW				
evif tniop ruof	evif	Evif tniop evif	xis	neves

LIVEWORKSHEETS

Question 16				
A train 100 m long enters a one kilometre long tunnel. It is travelling at 100 m/s. How many seconds before the end of the train leaves the tunnel?				
5 sec	8 sec	10 sec	12 sec	14 sec

Question 17				
I can skate at 10 km/h on my longboard, and my friend can skate at 8 km/h on his. In a one km race, how much time do I beat my friend by?				
1.5 min	2 min	2.5 min	6 min	7.5 min

Question 18				
Andrea was selling her fancy pens for £100. Two things happened. She raised the price by 20%. No one wanted to buy them. She then reduced the price by 20%. What is the selling price now?				
£80	£96	£100	£108	£120

LIVEWORKSHEETS

Question 19				
How many small cubes of side 3 cm can be fitted into a larger cube of side 9 cm?				
3	6	9	12	27

Question 20				
Jane, Guy and Alice share buttons. Excitement plus, I know. The ratio of Jane to Guy is 5 : 2. The ratio of Guy to Alice is 3 : 5. What is the ratio of Jane to Alice? Remember to reduce your ratio to lowest terms. You will have to match up the ratios using multiplication so that the Guy number is the same...				
3 : 2	1 : 1	2 : 3	5 : 3	5 : 2

LIVEWORKSHEETS