



THIRD SPACE
LEARNING

Year 7 Maths Test Questions

KS3 Maths

Year 7 Maths Test KS3 Maths

Name Total marks 

Paper length: 1hr

Instructions

- Use black ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may be used.

Information

- The total mark for this paper is 50
- The marks for each question are shown in brackets
 - use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

You must have: Ruler graduated in centimetres and millimetres, pen, HB pencil, eraser.

1 The table shows the number of items sold in a shop over 4 weeks.

	Week 1	Week 2	Week 3	Week 4
Womens clothing	47	53	29	40
Mens clothing	36	33	35	41
Kids clothing	32	46	39	43
Shoes	18	21	17	19
Accessories	32	46	16	28

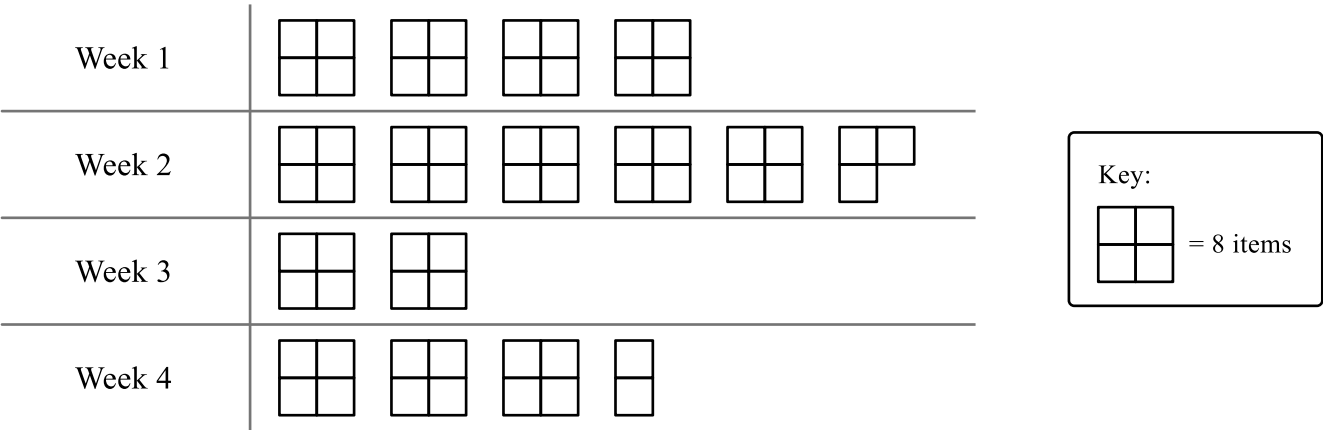
(a) How many items of mens clothing were sold in week 2?

(1 mark)

(b) In which week were 19 pairs of shoes sold?

(1 mark)

(c) The pictogram shows information for one of the items.



Which item is this?

(1 mark)

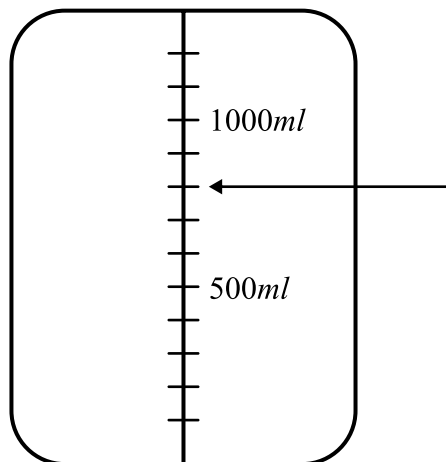
- 2 Ben wants to pay for an item which costs £1.39.
Ben has these coins.



Circle the coins Ben could use to make £1.39.

(1 mark)

- 3 Here is a container. Lucy pours water into the container until it reaches the line indicated.



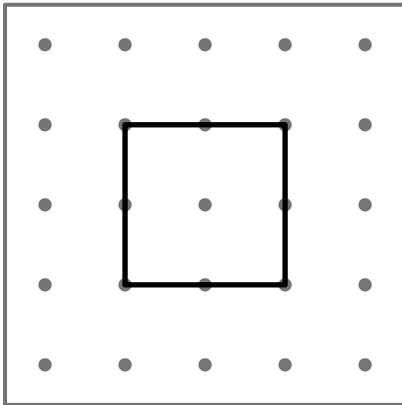
- (a) How much water does Lucy pour into the container?

(1 mark)

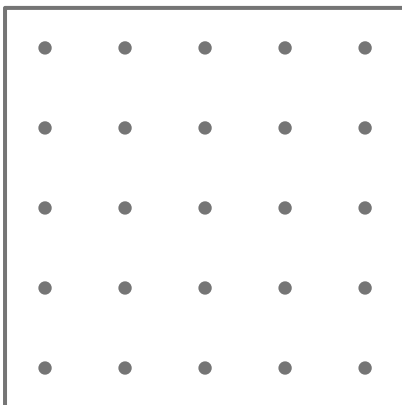
- (b) Convert your answer to litres.

(1 mark)

- 4 Here is a square made using the pins on a pin board.



- (a) Show how to make a parallelogram. Use the pins below.



(1 mark)

- (b) Helen draws a shape. It has the following properties:

Two pairs of parallel sides.

All four angles are right angles.

2 lines of symmetry.

Circle the name of the shape.

Rectangle

Square

Parallelogram

Rhombus

Kite

(1 mark)

5 (a) Complete these statements using = or \neq

(i) Four hundred and six thousand 406000

(ii) Thirty three thousand and six 330006

(2 marks)

(b) Write down the number that is one tenth more than 26.53

(1 mark)

6 (a) Look at this equation

$$a - 10 = b$$

Write a pair of numbers for a and b to make the equation true.

$a =$ ----- $b =$ -----
(1 mark)

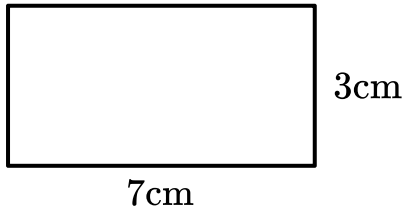
(b) Look at this equation

$$2c + 3 = d$$

Write a pair of numbers for c and d to make the equation true.

$c =$ ----- $d =$ -----
(1 mark)

7 Here is a rectangle.



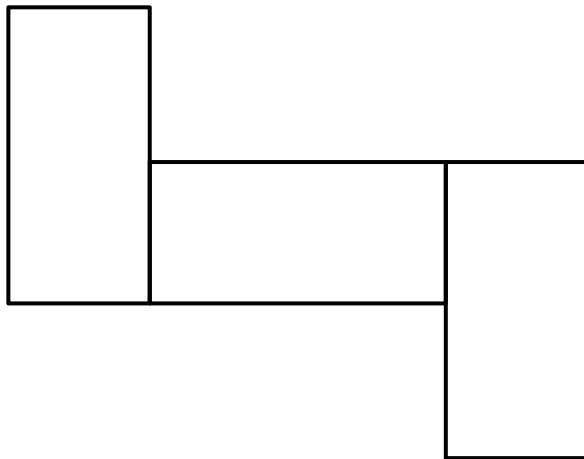
(a) Work out the area and the perimeter of the rectangle.

Area : cm^2

Perimeter : cm

(2 marks)

(b) Austin makes a compound shape using identical copies of the rectangle.



Work out the area and the perimeter of the compound shape.

Area : cm^2

Perimeter : cm

(3 marks)

8 April and Sophia answer some questions on decimals.

(a) April wants to work out $3.4 + 11.2$

She writes

$$\begin{array}{r} 3.4 \\ + 11.2 \\ \hline 45.2 \end{array}$$

Explain April's mistake.

(1 mark)

(b) Sophia wants to work out $6.3 - 2.7$

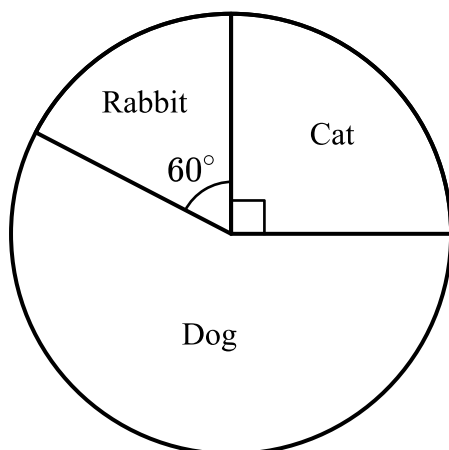
She writes

$$\begin{array}{r} 6.3 \\ - 2.7 \\ \hline 4.4 \end{array}$$

Explain Sophia's mistake.

(1 mark)

- 9 The pie chart shows 120 people's favourite pets.



- (a) How many people said their favourite pet was a cat?

(1 mark)

- (b) How many more people said their favourite pet was a dog than a rabbit?

(3 marks)

10 Katie has a party. 60 people attend the party.

- (a)** 35% of the people who attend the party are children.

Show how you would use a non-calculator method to work out 35% of 60.

(2 marks)

- (b)** $\frac{5}{12}$ of the people who attend the party are male.

Work out the number of males who attend the party.

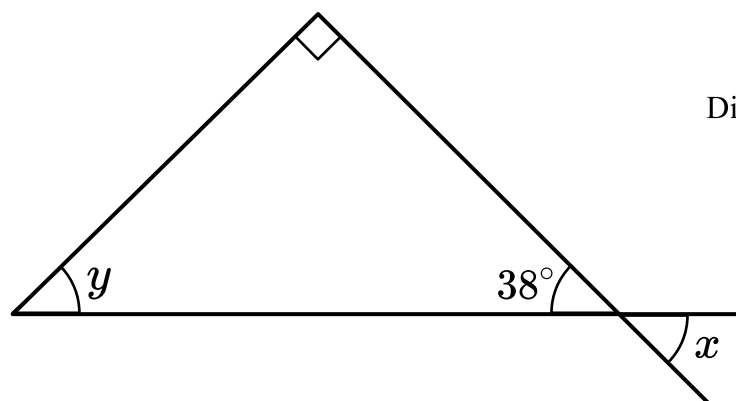
(2 marks)

- (c)** The ratio of vegetarian to non-vegetarian guests at the party is 1:5.

Work out the number of vegetarian guests who attend the party.

(2 marks)

11

Diagram **NOT** to scale

- (a) Work out the size of angle x .

$x =$ _____
(1 mark)

- (b) Work out the size of angle y .
Explain your answer.

$y =$ _____ $^{\circ}$ because _____

(2 marks)

12 It takes 40 oranges to make 5 *litres* of orange juice.

(a) How many oranges would it take to make 12 *litres* of orange juice?

(2 marks)

A machine can squeeze 20 oranges per minute.

A crate contains 4000 oranges.

The machine starts squeezing the oranges from the first crate at 8am.

(b) At what time will the machine have squeezed all of the oranges in the crate?

(3 marks)

13 Simplify these expressions:

(a) $3m - 6m$

(1 mark)

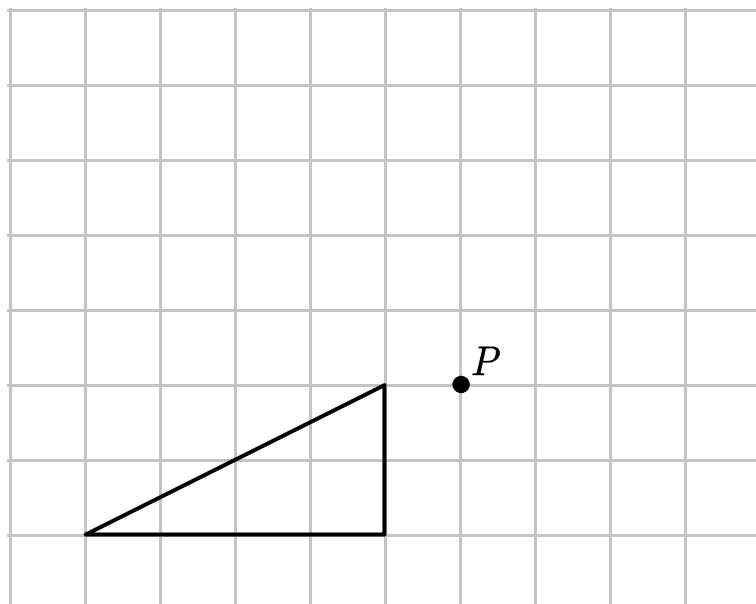
(b) $-2p - 11p$

(1 mark)

(c) $-4q \times 3$

(1 mark)

14 Here is a shape on a square grid.



Rotate the shape 90° clockwise around the point P.

(2 marks)

15 A contractor uses the following formula to work out how much to charge for a job:

$$C = 15h + 50$$

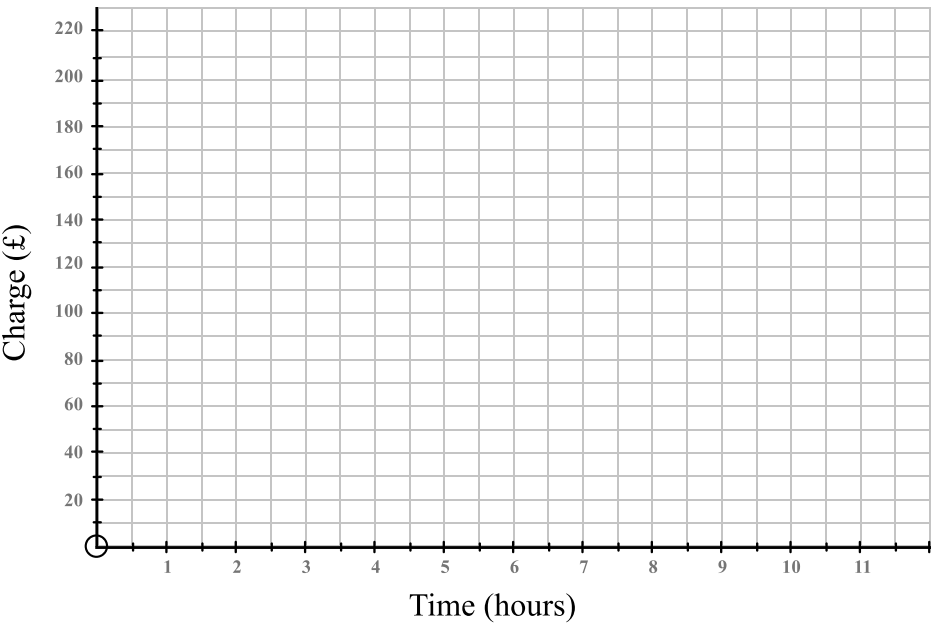
Where C is the charge and h is the number of hours taken to do the job.

(a) Use the formula to complete the table.

<i>h</i>	2	5	8	
<i>C</i>	80		170	200

(2 marks)

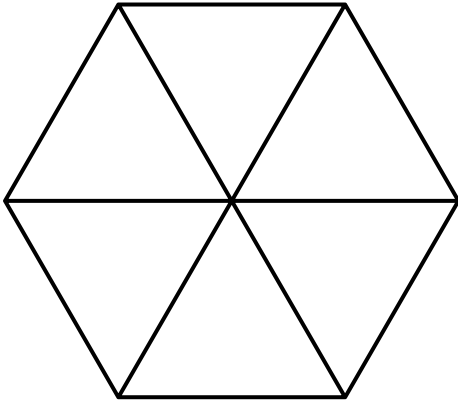
(b) Use your table to plot a graph on the grid below, showing the cost of a job against the time the job takes.



(2 marks)

16 Complete the spinner so that the following statements are true.

- The spinner contains 6 different numbers between 1 and 9.
- The probability of the spinner landing on an odd number is $\frac{2}{3}$.
- The probability of the spinner landing on a square number is $\frac{1}{2}$.
- The probability of the spinner landing on a prime number is $\frac{1}{3}$.



(3 marks)

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