



THIRD SPACE
LEARNING

Year 8 Maths Test Questions

KS3 Maths

Year 8 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 Here is a sequence.

5 11 17 23

(a) Write down the next two terms in the sequence.

-----, -----
(1 mark)

(b) Write down the rule to get from one term to the next.

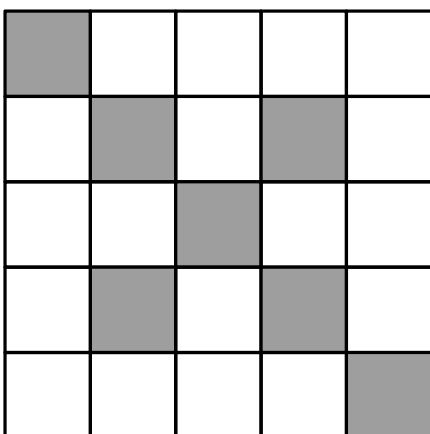
(1 mark)

(c) Is the number 100 in the sequence? Explain how you know.

----- because -----

(1 mark)

2 (a) Draw a line of symmetry on this shape.

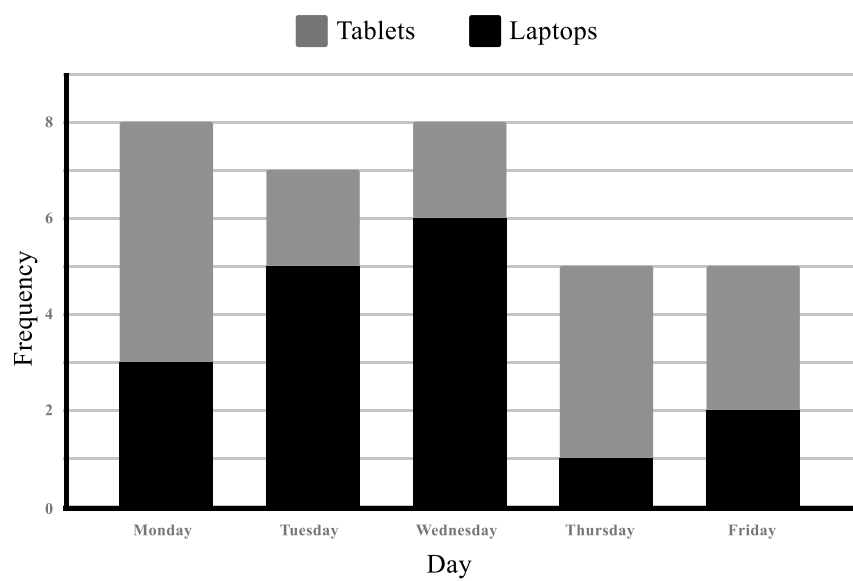


(1 mark)

(b) Write down the order of rotational symmetry for the shape.

(1 mark)

3 The chart shows the number of laptops and tablets sold in a shop over 5 days.



(a) On the day on which the most laptops were sold, how many tablets were sold?

..... laptops

(1 mark)

(b) Over the 5 days, were more tablets or laptops sold?

☐

laptops

☐

tablets

(1 mark)

- 4 (a) Round 14.27149 to 1 decimal place.

(1 mark)

- (b) Write a number below to make this sentence correct:

----- rounded to the nearest ten is 500
(1 mark)

-
- 5 Here are the heights of 10 children:

132cm	129cm	119cm	125cm	130cm
129cm	128cm	131cm	129cm	130cm

- (a) Write down the mode.

(1 mark)

- (b) Calculate the mean height.

(2 marks)

- 6 The table shows the cost of sending a package.

Size	Weight	Cost
Small	0 – 200g	£3.10
Medium	201g – 400g	£4.70
Large	401g – 1kg	£5.60
Extra large	More than 1kg	£7.20

- (a) Richard wants to send two packages. One package weighs 350g and the other package weighs 625g.

How much, in total, does it cost Richard to send the two packages?

(2 marks)

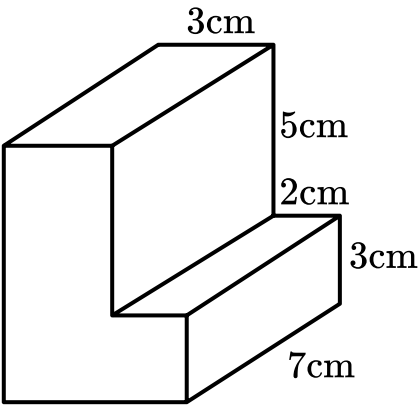
- (b) Elsie sends 2 packages weighing 180g each. She also sends another three identical packages.

It costs Elsie £23.

What size are the three identical packages?

(3 marks)

7 Here is a prism.

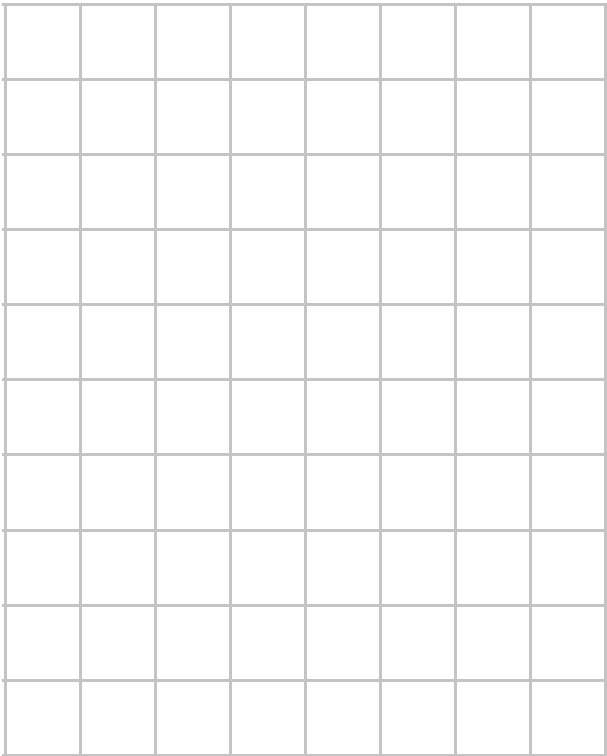


(a) Complete the table:

Number of faces	
Number of edges	
Number of vertices	

(2 marks)

(b) On this centimetre squared grid, draw an accurate plan of the shape.



(2 marks)

8 Jane thinks of a number.

- The number is between 50 and 100.
- The number is a multiple of 8.
- The number is a factor of 192.
- The number is one less than a prime number.

Write down Jane's number.

(3 marks)

9 (a) Expand and simplify $2(3y + 5) - 4(y + 2)$

(2 marks)

(b) Solve $6(3x + 11) = 30$

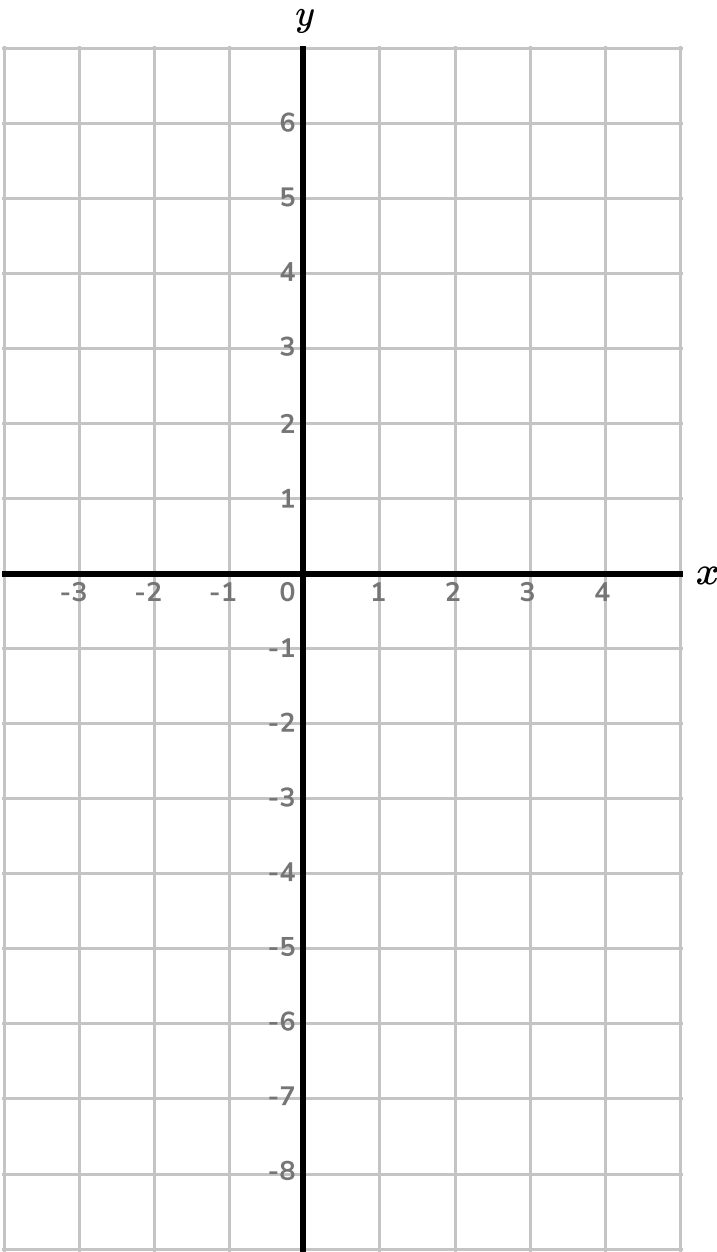
$x =$ -----
(2 marks)

10 (a) Complete the table of values for $y = 3x - 2$

x	-1	0	1	2
y		-2		4

(1 mark)

(b) On the grid below plot the graph of $y = 3x - 2$



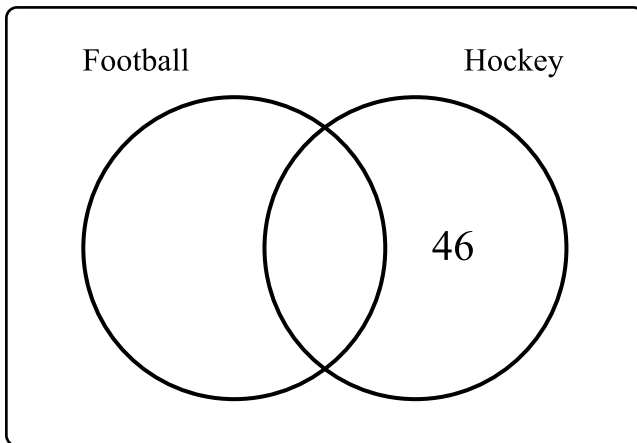
(2 marks)

(c) Write down the equation of another line that is parallel to the line $y = 3x - 2$

(1 marks)

- 11** 100 students were asked whether they like football or hockey.
46 students said they only liked hockey, 12 students said they liked both and
17 students said they liked neither.

(a) Complete the Venn diagram.



(2 marks)

(b) A student is chosen at random.

What is the probability that the student likes football?

(1 mark)

12 Ava and Adrian are answering some questions on fractions.

(a) Here is one of Ava's answers:

$$\frac{3}{5} + \frac{4}{7} = \frac{7}{12}$$

Explain Ava's mistake.

(1 mark)

(b) Here is one of Adrian's answers:

$$5 \times \frac{2}{7} = \frac{10}{35}$$

Explain Adrian's mistake.

(1 mark)

13 The circumference of a circle is 75.4cm .

Work out the area of the circle.

Give your answer to 1 decimal place.

cm^2

(3 marks)

14 (a) Simplify $a^4 \times a^3$

(1 mark)

(b) Simplify $\frac{12b^7}{2b^2}$

(2 marks)

15 A bike shop is having a sale. Prices are reduced by 20%.

(a) Find the sale price of a bike which usually costs £160.

(2 marks)

(b) On the final day of the sale, all sale prices are reduced by a further 20%.

Sion says that this means that the price of the bikes has been reduced by 40% on the final day of the sale.

Which statement is correct?

☐

Sion is incorrect - they have been reduced by less than 40%

☐

Sion is correct

☐

Sion is incorrect - they have been reduced by more than 40%

☐

There is not enough information to decide whether Sion is correct

Explain your answer

(2 marks)

- 16** The ratio of the exterior angle and interior angles of a regular polygon is 1:4.
How many sides does the polygon have?

(3 marks)

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