



**PREDICTED
PAPER**



Centre Number	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Candidate Number	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Surname	_____									
Forename(s)	_____									
Signature	_____									

GCSE MATHEMATICS

F

Foundation Tier Paper 2 Calculator Allowed

Tuesday 7 June 2022

Morning

Time allowed: 1 hour 30 minutes

Student Self Reflection

Topics I need to **revise**

Topics I need to **learn**

Silly Mistakes?

Target mark for next time

For teacher use	
Pages	Mark
2-3	
4-5	
6-7	
8-9	
10-11	
12-13	
14-15	
16-17	
18-19	
20-21	
22	
TOTAL	

Answer **all** questions in the spaces provided.

Do not write
outside the
box

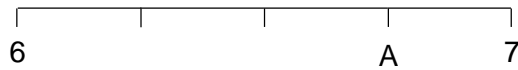
- 1 Circle the range of 15 and 10 [1 mark]

1.5 5 25 150

- 2 Circle the expression equivalent to $a \times a - b \times 3$ [1 mark]

$a^2 - 3b$ $2a - 3b$ $a^2 - b^3$ $2a - b^3$

- 3 Here is a number line.



Which number is at A?

Circle your answer.

[1 mark]

6.3 6.75 6.8 6.9

4 Circle the calculation that gives the answer 12.

[1 mark]

$3 + 3 \times 2$

$3^2 \times 2$

$6 + 12 \div 2$

$2 \times 2 + 2 \times 3$

5 Choose **one** of the following to make a correct statement each time.

[3 marks]

is less than

is equal to

is greater than

$\frac{2}{3}$ _____ 0.6

$\frac{3}{8}$ _____ 0.38

$\frac{24}{5}$ _____ $4\frac{3}{5}$

6 335 students attend a school trip.

A coach can take 62 students. The school hires 4 coaches.

Any remaining students will attend on minibuses.

Each minibus can hold 14 students.

Work out how many minibuses the school needs to hire.

[3 marks]

Answer _____

7 Hannah goes to the cinema to watch a film.

At 2:25pm the adverts start and last for 15 minutes.

After the adverts the film begins and lasts for 1 hour and 37 minutes.

At what time does the film finish?

[2 marks]

Answer _____

8 Alvin, Simon and Theo all collect marbles.

Alvin has k marbles.

Simon has 3 more marbles than Alvin.

Theo has twice as many marbles as Alvin.

Complete the table by writing an expression in for Simon and Theo.

[2 marks]

Person	Number of marbles
Alvin	k
Simon	
Theo	

9 Factorise fully $8t - 12$

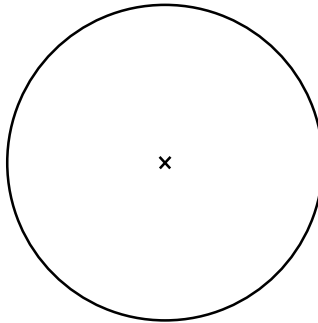
[2 marks]

Answer _____

10 (a) Draw a **tangent** onto the circle below.

[1 mark]

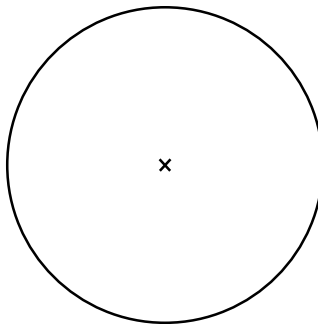
The centre of the circle is marked with a ×



10 (b) Draw a **sector** onto the circle below.

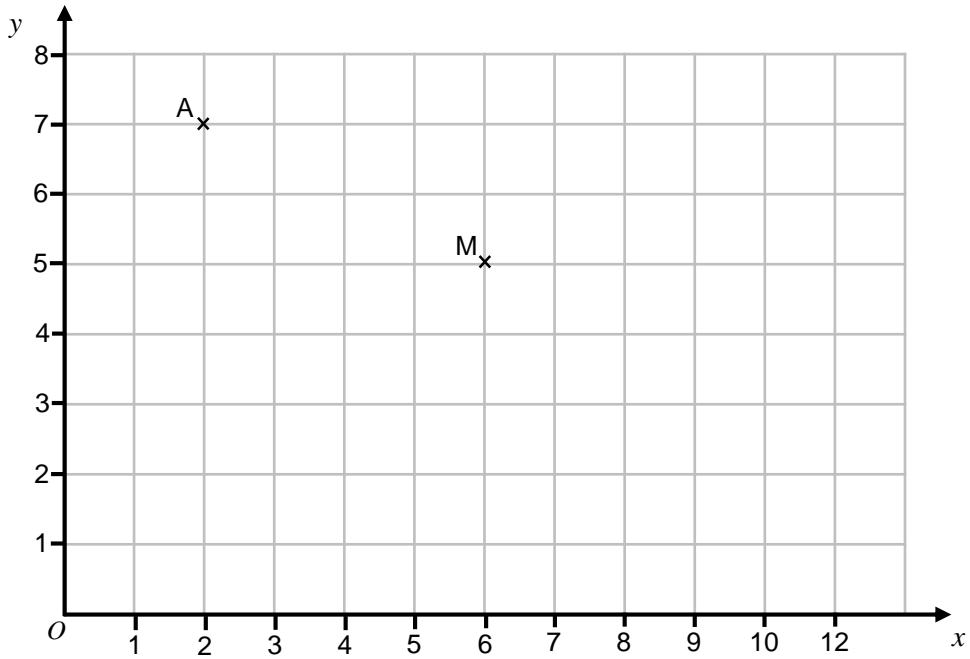
[1 mark]

The centre of the circle is marked with a ×



Turn over ►

11



11 (a) Write down the coordinates of point A.

[1 mark]

Answer (_____ , _____)

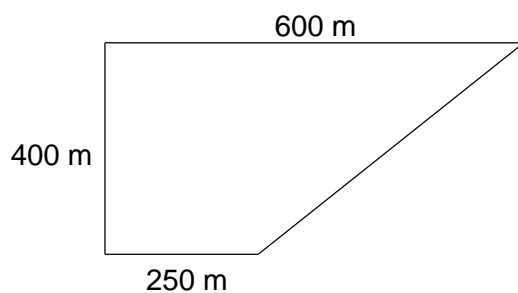
11 (b) M is the midpoint of the line segment AB.

Work out the coordinates of point B.

[2 marks]

Answer (_____ , _____)

- 13 A farmer's field is shown below.



Not drawn
accurately

Draw a scale diagram of the farmer's field on the grid below.

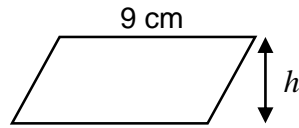
[3 marks]

Use the following scale: 1cm represents 50m



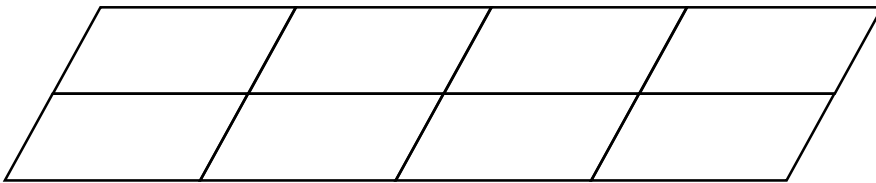
14 Here is a parallelogram.

It has a width of 9cm and perpendicular height h .



Not drawn
accurately

8 identical parallelograms are used to make a compound shape below.



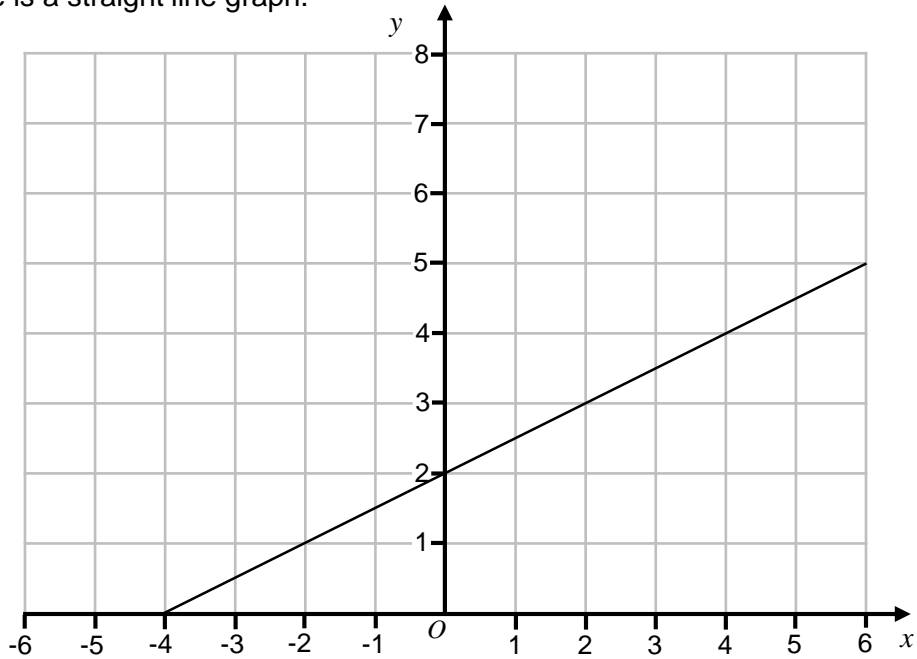
The area of the compound shape is 432 cm^2

Calculate the value of h .

[3 marks]

Answer _____ cm

- 15 Here is a straight line graph.



- 15 (a) Write down the coordinates of the y -intercept

[1 mark]

Answer (_____ , _____)

- 15 (b) Work the gradient of the line.

[2 marks]

Answer _____

- 15 (c) Use your answers to parts (a) and (b) to write down the equation of the line.

[1 mark]

Give your answer in the form $y = mx + c$

Answer _____

16 A sweet shop sells 150g of sweets for £1.32

Work out the cost of buying 475g of sweets.

[3 marks]

Answer £ _____

17 A bag contains blue and yellow counters.

84% of the counters are blue.

Write the ratio of blue counters to yellow counters.

Give your answer in the form $n : 1$

[2 marks]

Answer _____ : _____

Turn over ►

18 Here is a parallelogram.



Below are statements about parallelograms.

Tick the correct box for each statement.

[3 marks]

	Always True	Could be True	Never True
All sides are equal in length	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opposite angles are equal in size	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjacent angles add to 180°	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19 The ratio of males to females in a class is 2 : 3

[1 mark]

To the nearest percent, what percentage of the class are females?

Circle your answer.

40%

47%

60%

67%

20 Harpreet thinks of a decimal number.

$$\frac{4}{5} \text{ of his number} = \frac{1}{4} \text{ of } 60$$

Work out Harpreet's number.

[3 marks]

Answer _____

21 The point (3, 2) lies on the graph of one of the equations below.

[1 mark]

Circle the correct equation.

$$y = 2x - 4$$

$$y = 2x + 1$$

$$y = 2x + 4$$

$$y = 2x - 1$$

22 Olivia is playing a game at the fair. The probability that she wins is 0.3.

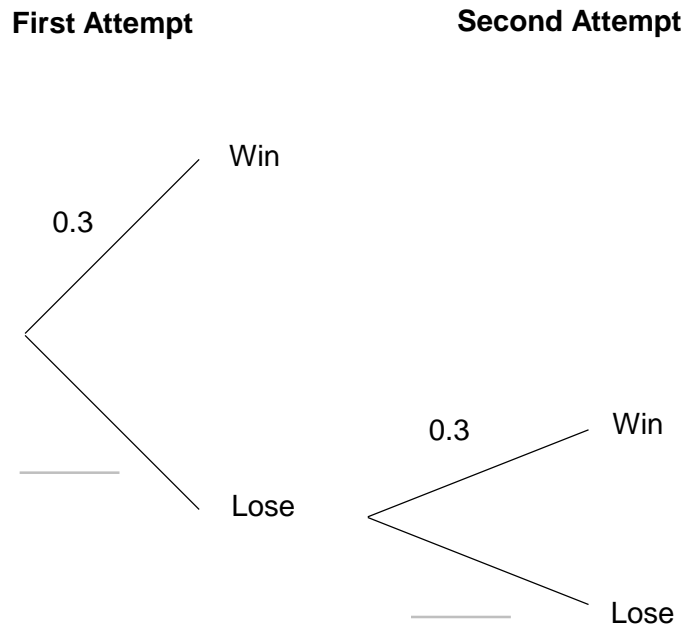
Olivia plays the game to try and win a prize.

If she wins the first attempt, she stops and takes her prize.

If she loses the first attempt, she tries one more time.

22 (a) Complete the tree diagram

[1 mark]



22 (b) Calculate the probability that Olivia does not win a prize.

[2 marks]

Answer _____

23 Jim is playing Chess against a computer.

He records his results of the first 20 games in the table below.

Wins	7
Draws	2
Losses	11

23 (a) Write down the relative frequency of wins.

[1 mark]

Answer _____

23 (b) Jim plays a total of 400 games against the computer before retiring.

Use your answer to part (a) to estimate the number of times that Jim won.

[2 marks]

Answer _____

- 24 The table shows the share price for a company during January and March.

January	£3.00
February	
March	£1.08

From January to February the share price increased by 20%

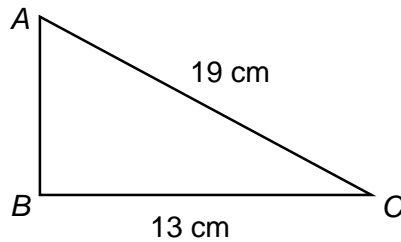
- 24 (a) Calculate the share price for February. [2 marks]

Answer _____

- 24 (b) Calculate the percentage decrease in the share price from February to March. [2 marks]

Answer _____ %

25 Here is a triangle ABC



Angle $ABC = 90^\circ$

Calculate the length AB.

Give your answer to 1 decimal place.

[3 marks]

Answer _____ cm

26 Write $7(2p + 4) - 2(p - 5)$ in the form $ap + b$

[3 marks]

Where a and b are integers.

Answer _____

27

$x + 7 = 22$

$y = 18$

What percentage of y does x represent?

[3 marks]

Answer _____ %

28

A vet records the mass of dogs that visit their surgery.

The mean mass of the first 8 dogs is 34.2 kg.

The next dog to come in has a mass of 27kg.

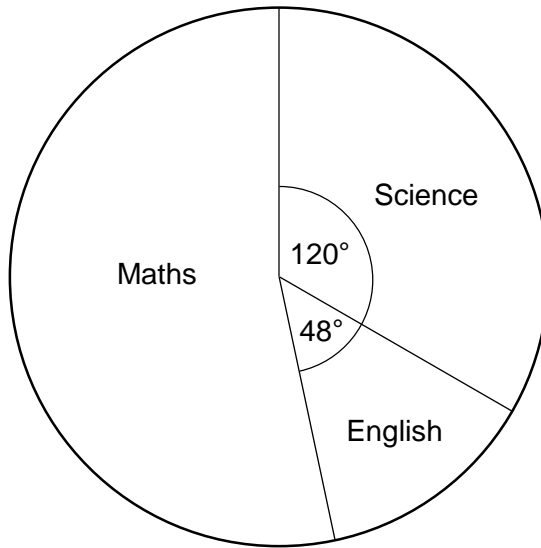
Calculate the mean mass of all 9 dogs.

[3 marks]

Answer _____ kg

29

The pie chart shows the favourite core subject of students at a large school.



430 of the students selected science.

Work out how many students selected Maths.

[3 marks]

Answer _____

30

 P is a prime number. C is a cube number.

$$C = 2P + 1$$

Find a possible set of values for P and C .**[3 marks]**

$$P = \underline{\hspace{2cm}} \quad C = \underline{\hspace{2cm}}$$

Turn over for next question

