



THIRD SPACE
LEARNING

Mathematics

Paper 2

(Calculator)

Foundation Tier

Edexcel GCSE

SET 3

Mathematics Paper 2 (Calculator) Foundation Tier Edexcel

GCSE SET 3

Name

Total marks

Paper length: 1hr 30mins



Question	Mark
1	
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Instructions

- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name, centre number and candidate number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.
- 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 80
- 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, protractor, pair of compasses, pen, HB pencil, eraser. Tracing paper may be used.

This practice paper is based on the topics from the **advanced information for the November 2024 exam series**.

Please note, this practice paper is an example to help revision, these topics can be tested in other ways and other topics may be included in the actual papers

- 1 Write down the value of the 7 in the number 672.1

(Total for Question 1 is 1 mark)

- 2 Change 3250g to *kg*

kg
(Total for Question 2 is 1 mark)

- 3 Write the following numbers in order of size.
Start with the smallest number.

0.43 4.03 4.3 0.403 0.34

(Total for Question 3 is 1 mark)

- 4 Find the value of $\sqrt{38.44}$

(Total for Question 4 is 1 mark)

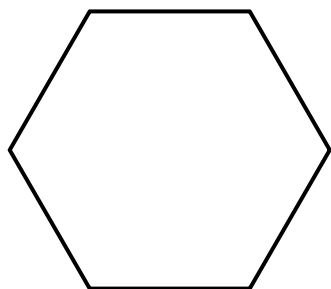
5 Here is a list of numbers.

4 5 8 4 6 2 1 1 5 2 5

Write down the mode of the numbers.

(Total for Question 5 is 1 mark)

6 Here is a regular polygon.



(a) Write down the name of the polygon.

(1)

(b) Write down the order of rotational symmetry of the polygon.

(1)

(Total for Question 6 is 2 marks)

- 7 Lesley is running a cheerleading class.

The costs of running the class are shown in the table.

Hall hire	£18
Insurance	£6
Snacks	£3

10 children attend the class. Each child pays £5.

Work out the profit Lesley makes from her class.

(Total for Question 7 is 2 marks)

- 8 A farmer keeps sheep and pigs.

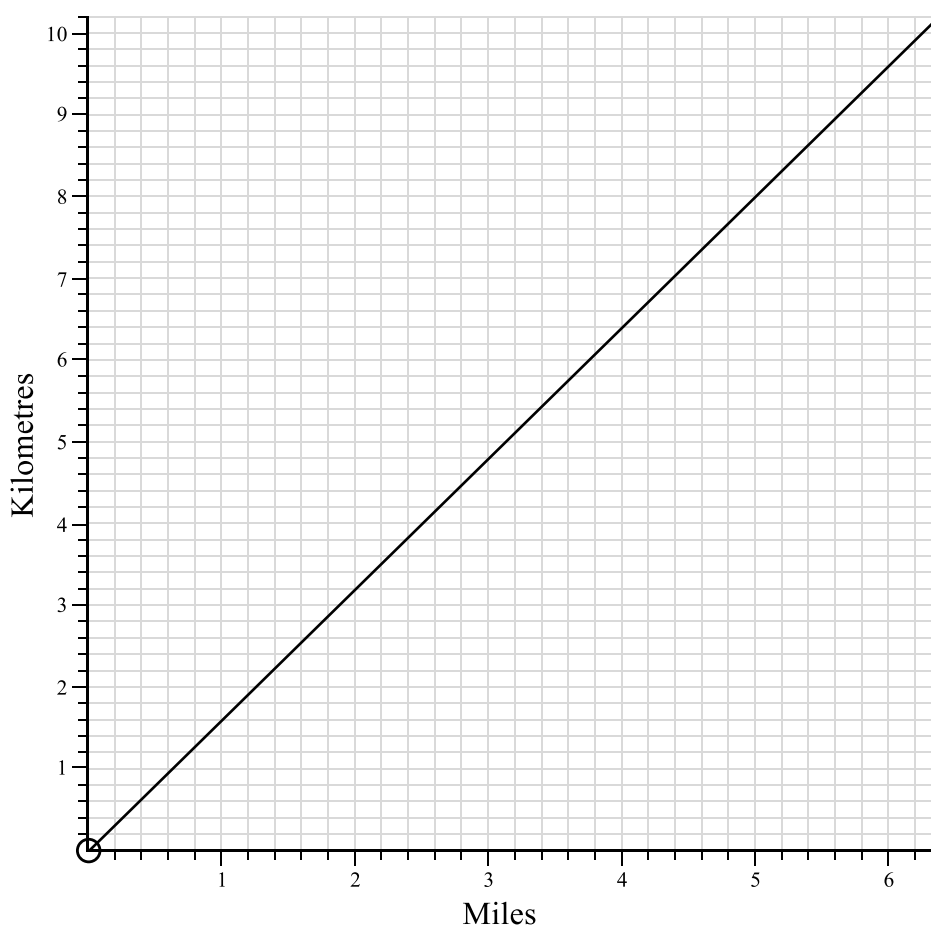
There are p pigs on the farm.

There are twice as many sheep as pigs on the farm.

Write an expression, in terms of p , for the total number of animals on the farm.

(Total for Question 8 is 1 mark)

9 You can use this graph to convert between *miles* and *kilometres*.



(a) Change 8km to *miles*.

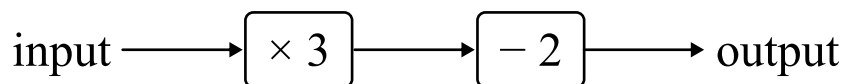
..... *miles*
(1)

(b) Change 3 *miles* to *kilometres*.

..... *km*
(1)

(Total for Question 9 is 2 marks)

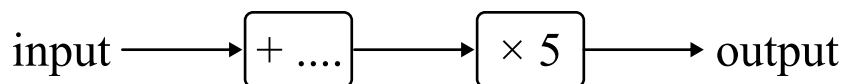
10 Here is a number machine.



(a) Work out the output when the input is 9.

(1)

Here is a different number machine.



When the input is 6, the output is 85.

(b) Complete the number machine.

(2)

(Total for Question 10 is 3 marks)

- 11** The same bike is sold in two shops.

Both shops have an offer on.

Shop A

Usual price: £145

Offer: 20% off

Shop B

Usual price: £130

Offer: 15% off

Ben wants to purchase the bike.

Which shop is selling the bike at the lowest price?

You must show your working.

(Total for Question 11 is 3 marks)

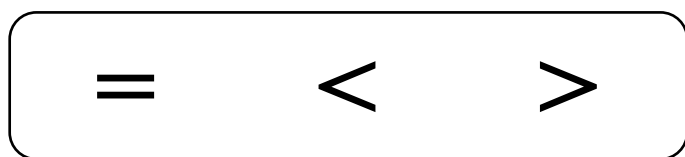
- 12** $C = 2m + 5n$

Work out the value of C when $m = 10$ and $n = -3$

$C =$ -----

(Total for Question 12 is 2 marks)

13 The box below contains three mathematical symbols.



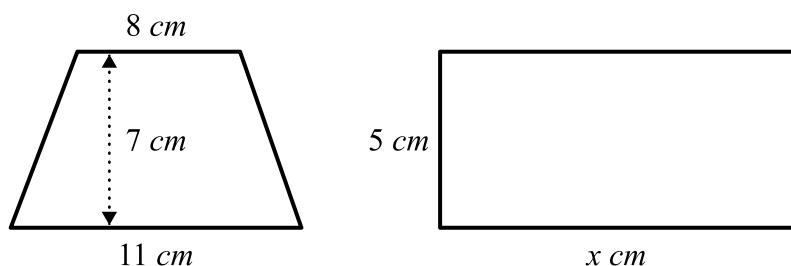
From the box, choose a symbol to make each of the following statements correct.

(i) $\frac{5}{7}$ $\frac{16}{21}$

(ii) $\frac{9}{4}$ $2\frac{1}{4}$

(Total for Question 13 is 2 marks)

14 The diagram shows a trapezium and a rectangle.



The area of the rectangle is double the area of the trapezium.
Find the value of x .

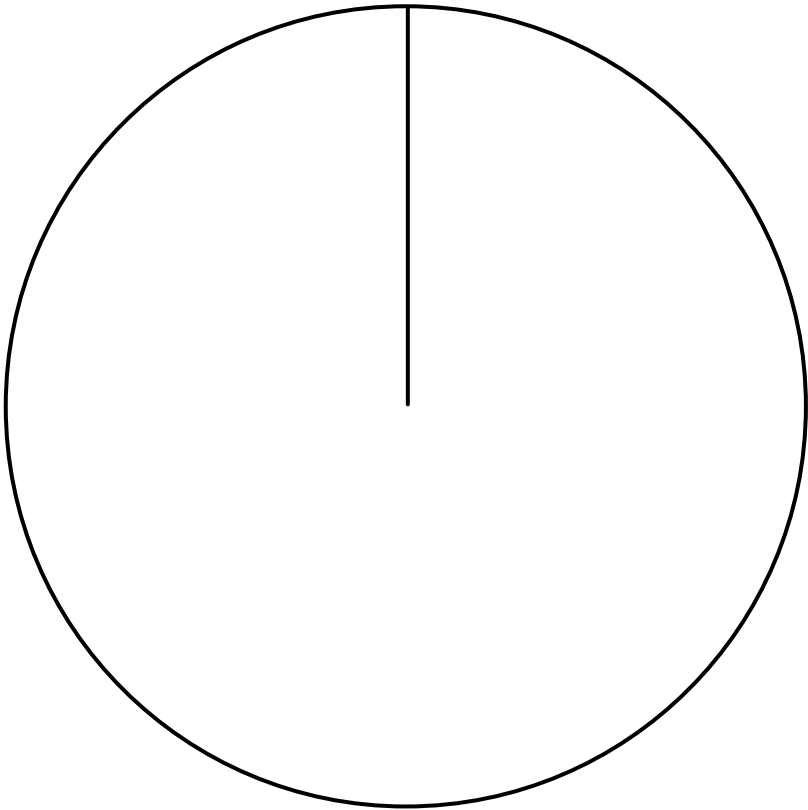
$x =$

(Total for Question 14 is 3 marks)

15 The table gives information about the weather over a number of days.

Weather	Number of days
Sunny	11
Rainy	13
Cloudy	6

Draw an accurate pie chart for this information



(Total for Question 15 is 3 marks)

- 16** Strawberries are sold in containers of 250g, 400g or 600g.

Strawberries
250g
£1.90

Strawberries
400g
£2.20

Strawberries
600g
£3.60

Which container is the best value for money?

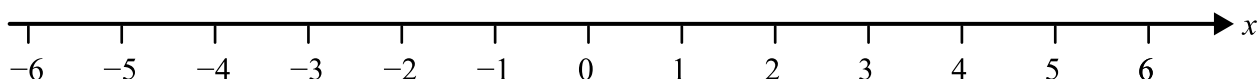
You must show all of your working.

(Total for Question 16 is 4 marks)

- 17** (i) Solve $3(x - 2) < 6$

(2)

(ii) Represent your solution on the number line below.



(2)

(Total for Question 17 is 4 marks)

18 Sion asks 250 children what their favourite sport is.
The two-way table shows some information about their answers.

	Football	Swimming	Athletics	Total
Male		46		123
Female	37			
Total		85	83	250

(a) Complete the two way table.

(3)

(b) One child is chosen at random.
What is the probability that the chosen child’s favourite sport is football?

(1)

(Total for Question 18 is 4 marks)

- 19 Jake wants to plant a hedge.
- Jake wants his hedge to contain 4 plants per metre.
- Jake wants his hedge to be 60m long.
- Jake will plant hazel, hawthorn and oak trees in the ratio 2:2:1.
- The cost of each type of tree is shown in the table.

Hazel	Hawthorn	Oak
65p per plant	59p per plant	85p per plant

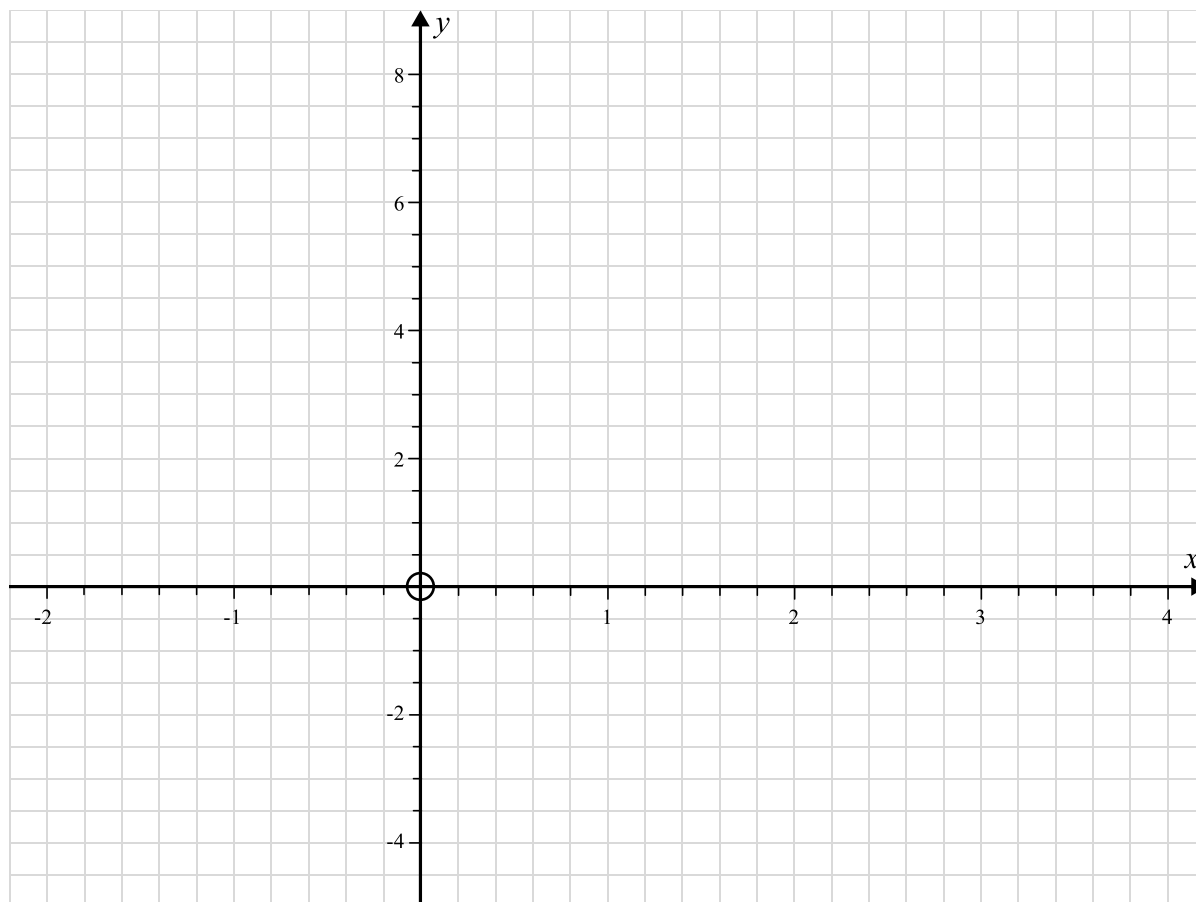
Work out the total cost of the plants for the hedge.

Give your answer in pounds and pence.

£

(Total for Question 19 is 5 marks)

20 On the grid below, draw the graph of $y = 4 - 2x$ for the values of x from -2 to 4 .



(Total for Question 20 is 3 marks)

21 Lucy owns a shop.

Lucy is ordering items to make gift bags. The gift bags will contain 1 mug,
1 spoon and 1 sachet of hot chocolate.

Mugs come in packs of 6.

Spoons come in packs of 20.

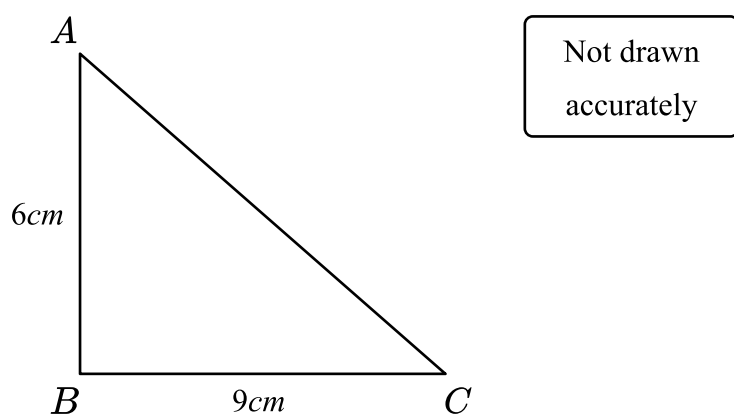
Hot chocolate sachets come in packs of 15.

Lucy wants to order the same number of mugs, spoons and hot chocolate sachets.

What is the smallest number of each item she can order so that she has the same
number of each item?

(Total for Question 21 is 2 marks)

22 Here is triangle ABC .



The perimeter of the triangle is 25cm .

By calculation, decide whether triangle ABC is a right-angled triangle.

(Total for Question 22 is 3 marks)

23 Hollie, Izzy and Jess all roll the same dice a number of times.
They each record how many times they roll a 6.

The table below shows their results.

	Hollie	Izzy	Jess
Number of rolls	20	50	200
Number of 6s	1	14	31

(a) Whose results give the best estimate of the probability of rolling a 6 with this dice?
Explain your answer.

(1)

(b) Hollie says ‘I think the dice is biased’.

(i) Do Hollie’s results support this statement? Explain your answer.

(1)

(ii) Do the overall results support this statement? Explain your answer.

(1)

(Total for Question 23 is 3 marks)

24 (a) Expand and simplify $(x + 4)(x - 7)$

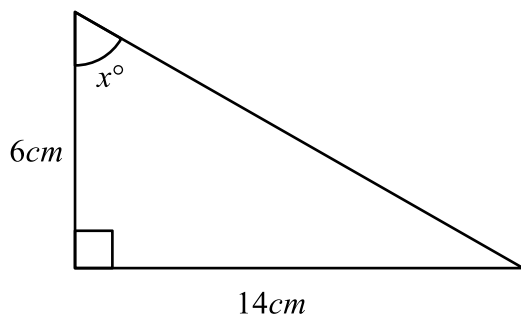
(2)

(b) Factorise $x^2 - 9$

(1)

(Total for Question 24 is 3 marks)

25 Here is a right-angled triangle.



Work out the value of x .

Give your answer correct to 1 decimal place.

o

(Total for Question 25 is 3 marks)

26 A factory has 12 machines.

When all 12 machines are running, the factory produces 345600 bars of chocolate over an 8 hour operating window.

One day, 3 of the machines are broken.

For how long must the remaining machines work to ensure the same number of chocolate bars are made?

Give your answer in hours and minutes.

hours minutes

(Total for Question 26 is 3 marks)

27 Solve the simultaneous equations

$$4a + 3b = 29$$

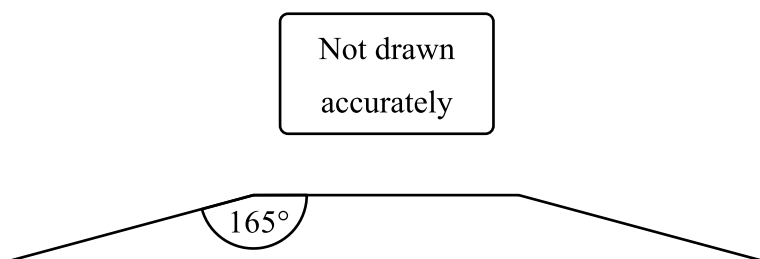
$$3a + 2b = 20.5$$

$a =$

$b =$

(Total for Question 27 is 4 marks)

28 Here is a section of a regular polygon



Work out the number of sides of the polygon.

(Total for Question 28 is 2 marks)

29 (a) Write the number 0.00238 in standard form.

(2)

(b) Write 2.71×10^5 as an ordinary number.

(1)

(c) Work out $5.4 \times 10^4 - 3.7 \times 10^3$

Give your answer in standard form.

(2)

(Total for Question 29 is 5 marks)

30 $\mathbf{a} = \begin{pmatrix} x \\ 5 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} 1 \\ y \end{pmatrix}$

(a) Find $3\mathbf{a} - 2\mathbf{b}$ as a column vector, in terms of x and y

(2)

(b) Given that $\mathbf{a} + \mathbf{b} = \begin{pmatrix} 4 \\ 3 \end{pmatrix}$, find the values of x and y .

$x =$

$y =$

(2)

(Total for Question 30 is 4 marks)

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