



THIRD SPACE
LEARNING

Mathematics

Paper 3

(Calculator)

Foundation Tier

OCR GCSE

SET 5

Mathematics Paper 3 (Calculator) Foundation Tier OCR

GCSE SET 5

Name

Total marks



Paper length: 1hr 30mins

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.

Question	Mark
1	
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Information

- The total mark for this paper is 100
- 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 2026 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 (a) What is the time 3 hours and 15 minutes after 8.35am?

(a) am [1]

(b) Faye starts her driving test at 11.45am.
Faye finishes her driving test at 12.25pm.

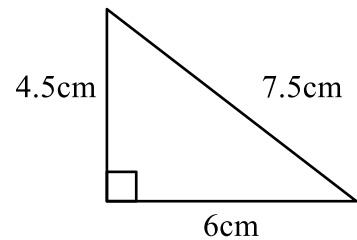
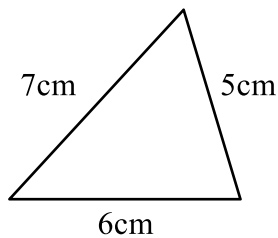
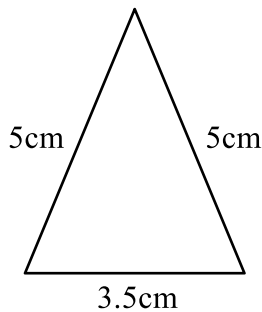
How long does Faye's driving test last?

(b) minutes [1]

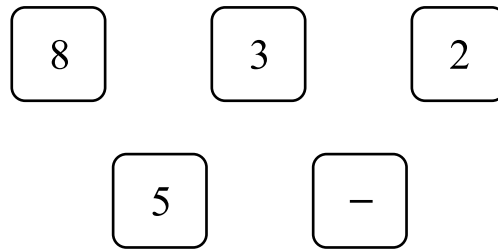
2 Write the correct label under each triangle. Choose from:

[3]

Right angled	Isosceles
Equilateral	Scalene



3 These are five tiles.



(a) Arrange the five tiles to make a calculation with the answer 7



[1]

(b) Write down a multiple of 8 that can be made using two of the five tiles.



[1]

(c) Raj picks one of the tiles at random.

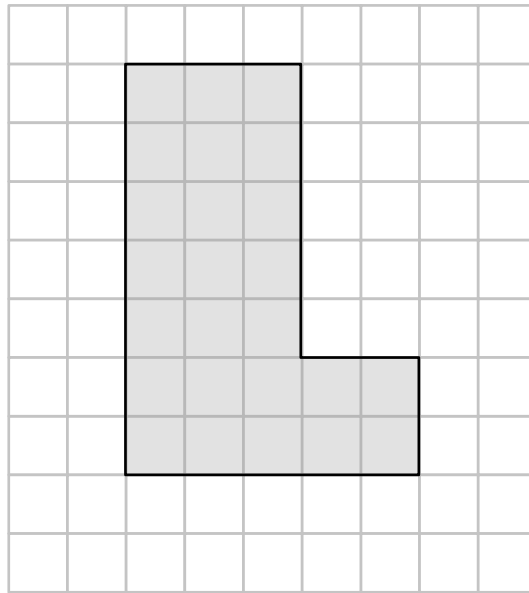
(i) What is the probability that Raj picks a tile with a number on it?

(c)(i) [1]

(ii) What is the probability that Raj picks a tile that is a prime number?

(c)(ii) [1]

4 The diagram shows a shape on a grid.

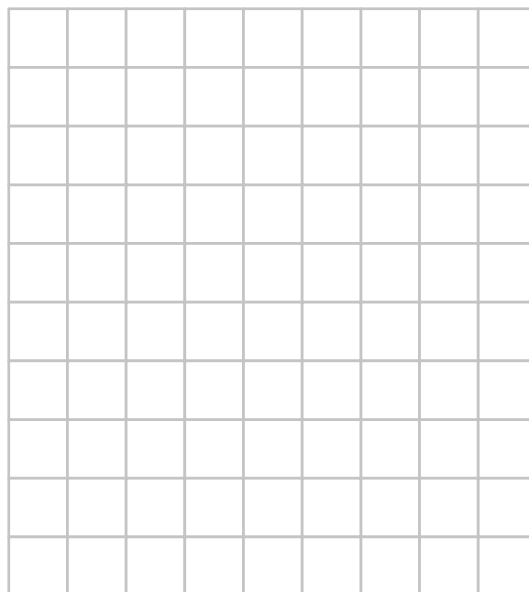


(a) Find the area of the shape.

(a) cm² [1]

(b) On the grid below, draw a rectangle that has a perimeter that is the same as the perimeter of the shape above.

[2]



5 This scale drawing shows a pond.



Scale 1cm
to 80cm

Work out the actual length and width of the pond.

Length cm

Width cm

[4]

6 Christopher has 4 children.

Christopher makes each of his children a packed lunch each day, and each child gets an apple.

Christopher can buy apples in packs of 6 for 99p or individually for 18p each.

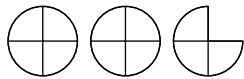
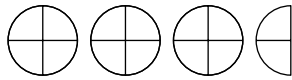
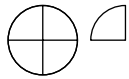
Christopher wants to buy enough apples for 5 days.


Is it cheaper for Christopher to buy packs of apples or individual apples?

Show how you decide.

..... [4]

7 The pictogram shows information about the number of birds of prey at a bird of prey centre

Owls	
Buzzards	
Red kites	
Ospreys	

Key:  = 8 birds

(a) There are 24 red kites at the centre.
Complete the pictogram.

[1]

(b) Write the ratio of the number of owls to the number of buzzards in its simplest form.

(b) : [2]

(c) What fraction of the birds are ospreys?

(c) [2]

8 Here is a list of ingredients for cupcakes

Savoury	Sweet	Drink
Campfire stew (S)	Cinnamon Buns (B)	Hot chocolate (C)
Jacket potatoes (P)	Marshmallows (M)	Tea (T)
		Warm apple juice (A)

Hannah is going to choose one savoury food, one sweet food and one drink.

Complete the table to show the possible combinations Hannah could choose.

Savoury	Sweet	Drink
S	B	C
S	B	T

[2]

9 (a) Write down a fraction equivalent to $\frac{1}{12}$

(a) [1]

(b) Find a fraction that is greater than $\frac{1}{12}$ and less than $\frac{2}{12}$

(b) [1]

10 (a) Write this ratio in its simplest form.

400 grams : 3 kilograms

(a) : [2]

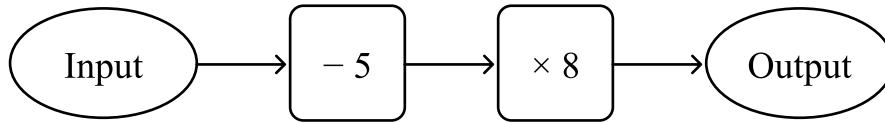
(b) The ratio 5 : 8 can be written in the form 1 : n .

Find the value of n .

Give your answer as a decimal.

(b) $n =$ [1]

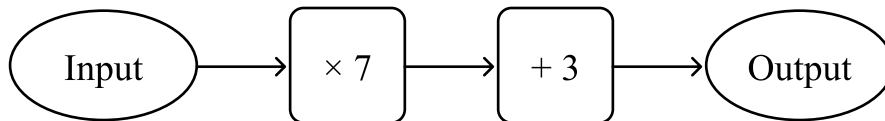
11 (a) Here is a number machine.



Work out the input when the output is 48.

(a) [2]

(b) Here is another number machine.



When the input is x , the output is y .

Work out a formula for y in terms of x .

(b) [2]

12 Annie and Rebecca want to work out $4 + a^2$ when $a = -3$

Annie writes:

$$4 + -3^2 = 1^2$$

$$= 1$$

Rebecca writes:

$$4 + (-3)^2 = 4 + -9$$

$$= -5$$

Annie and Rebecca are both incorrect.

(a) Explain the mistakes they have each made.

Annie

[1]

Rebecca

[1]

(b) Work out the correct answer to $4 + a^2$ when $a = -3$

(b) ----- **[1]**

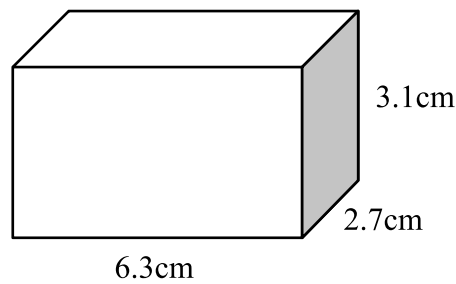
13 (a) Solve $4(3x - 2) = 52$

(a) $x =$ [2]

(b) Solve $\frac{4y + 1}{11} = 2$

(b) $y =$ [2]

14 Here is a cuboid.



Work out the volume of the cuboid.
Give your answer to 1 decimal place.

..... cm^3 [2]

15 (a) Printer A prints 12 pages per 20 seconds.

Printer B prints 11 pages per 15 seconds.

Printer A prints continuously for 8 minutes.

Printer B prints continuously for 10 minutes.

How many pages do the printers print altogether?

(a) **[4]**

(b) The office manager is considering purchasing a new printer.

The cost of ink for each printer is shown below.

Printer A and B
£63
Prints 2000 pages

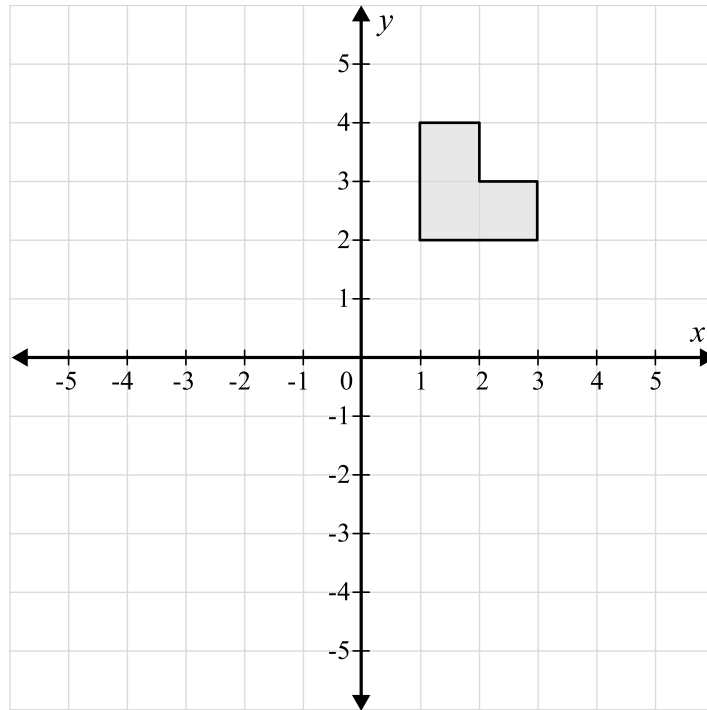
New printer
£32
Prints 1500 pages

27000 pages are printed in the office each year.

How much money will the office save on ink each year, if the new printer is purchased?

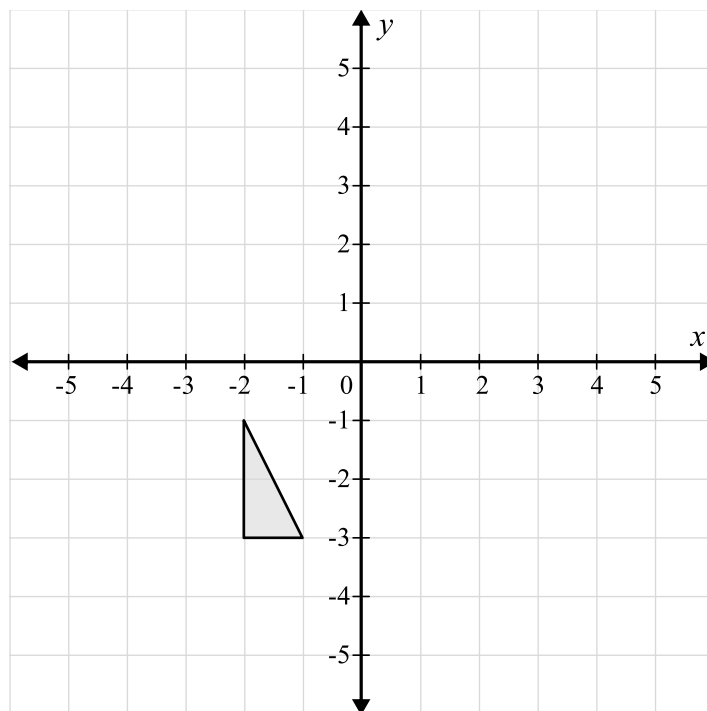
(b) **[4]**

16



(a) On the grid above, rotate the shaded shape 90° clockwise about the point $(0, 1)$

[2]



(b) On the grid above, enlarge the shaded shape by scale factor 3 from centre $(-4, -4)$

[2]

17 Bobby has £350 000. He wants to purchase a house.

When Bobby purchases a house, he will need to pay legal fees of £2000 as well as stamp duty tax at the following rates:

The first £120000 of the property price	No stamp duty
The second £125000 (£125000 – £250000)	2%
Anything above £250000	5%

Bobby decides he wants to buy a house for £330 000.

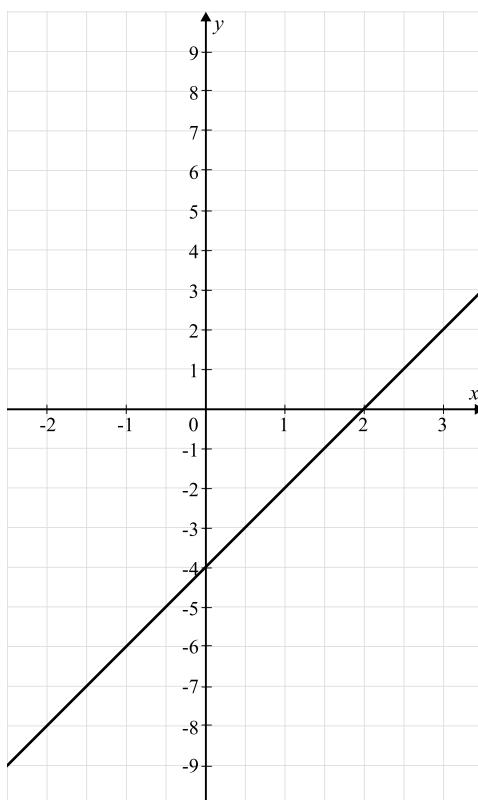
Can Bobby afford to buy the house and pay the fees and stamp duty?

Show how you decide.

----- [4]

18 (a) On the grid below, draw the graph $y = 5$

[1]



(b) Part of the graph of $y = 2x - 4$ is drawn on the grid.

(i) Write down the y - intercept.

(b)(i) [1]

(ii) The line continues to the right.

Will the line pass above, below or through the point (30, 58)?

Show how you decide.

The line $y = 2x - 4$ will pass the point (30, 58)

because

.....
.....

[2]

(iii) Write down the equation of a line that is parallel to $y = 2x - 4$

(b)(iii) [1]

19 A school is going to put on exam revision sessions.

There are 220 pupils in year 11.

The school asks a sample of 40 year 11 pupils which subjects they would most like revision sessions for.

Each pupil chooses one subject.

Here are the results of the survey:

Maths	16
English	12
Science	7
French	5

(a) Work out an estimate for the number of the 220 pupils who would choose maths.

(a) [2]

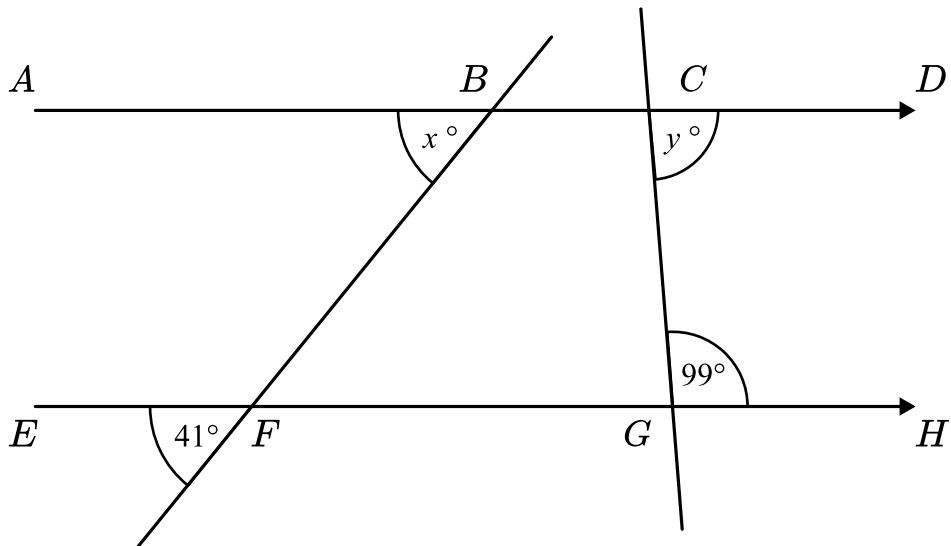
(b) State one assumption you made in part (a).

.....

.....

[1]

20



- (a) Write down the size of angle x
Give a reason for your answer

$x =$ _____ $^\circ$ because

[2]

- (b) Mike says $y = 99^\circ$
Is Mike correct? Explain your answer.
-
-
-

[2]

21 (a) Simplify $q^7 \times q^5$

(a) [1]

(b) Simplify $\frac{8p^9}{4p^2}$

(b) [2]

(c) Write down the value of a and b if $(2m^a)^3 = bm^{12}$

$a =$

$b =$

[2]

22 (a) Ben is a hockey goalkeeper.

The probability that Ben saves a goal is 0.7.

What is the probability that Ben does not save a goal?

..... [1]

(b) In one hockey season, there are 200 shots at the goal.

Work out an estimate for the number of goals Ben will save.

..... [1]

23 (a) Write 0.000034 in standard form.

(a) [1]

(b) Write 2.71×10^4 as an ordinary number.

(b) [1]

(c) Write the fraction $\frac{3 \times 10^8}{4.5 \times 10^9}$ in its simplest form.

(c) [1]

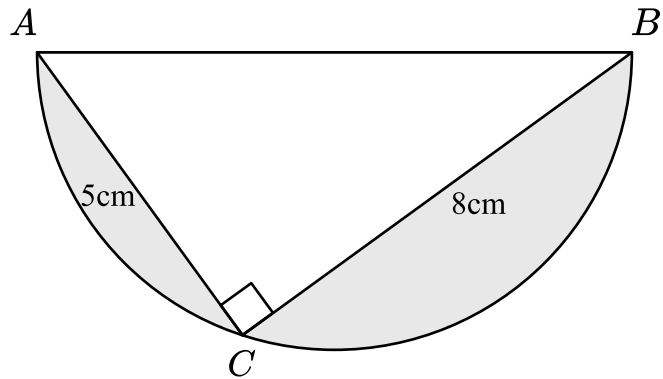
24 Solve

$$x^2 - 6x - 91 = 0$$

You must show your working.

$x =$ or $x =$ [3]

25 Here is a right angled triangle inside a semi-circle.



(a) Work out the length AB .

Give your answer to 2 decimal places.

(a) cm [2]

(b) Work out the shaded area.

Give your answer to 2 decimal places.

(b) cm^2 [4]

- 26** The mean of three numbers is 120
The three numbers are $3a$, $5a + 2$ and $2a + 8$
Work out the value of the smallest number.

----- [4]

- 27** Arianna and Cynthia are rehearsing their lines for a performance.

Arianna says

I think the probability that we remember all of our lines is 0.6

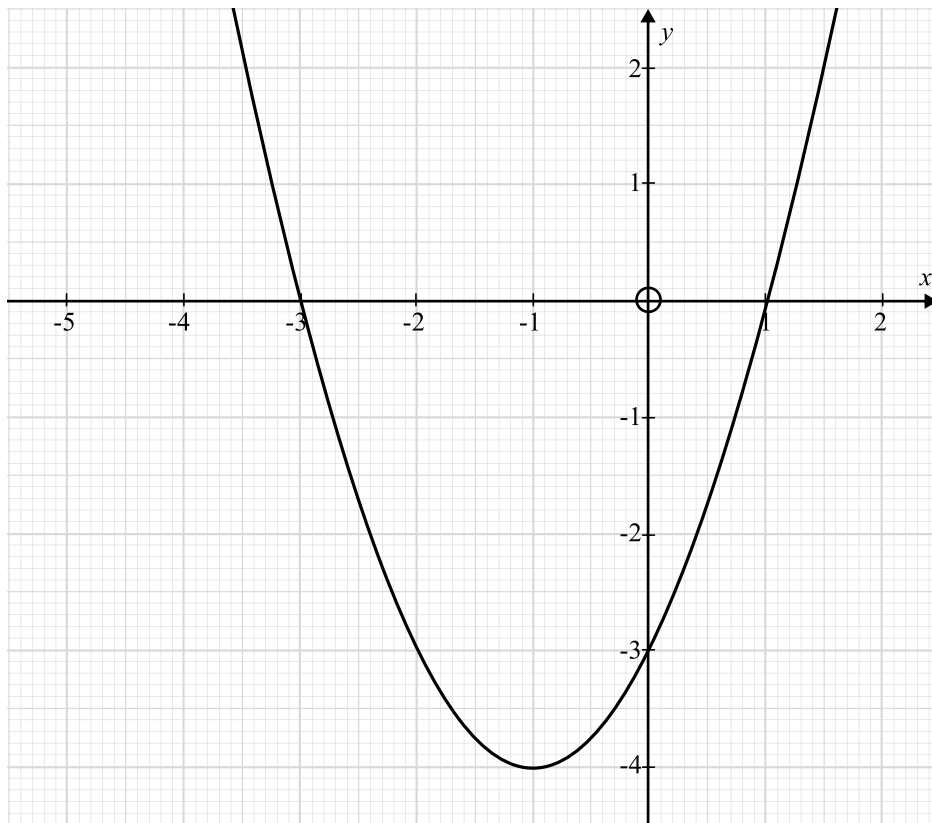
Cynthia says

I think the probability that we forget some of our lines is 0.35

Explain why Arianna and Cynthia cannot both be correct.

----- [1]

28 Here is the graph of $y = x^2 + 2x - 3$



(a) Write down the coordinates of the turning point on the graph of $y = x^2 + 2x - 3$

..... [1]

(b) Use your graph to find the solutions to $x^2 + 2x - 3 = -3$

..... [2]

End of Questions

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