Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Edexcel Mock Test Papers-Paper3 Test1

Paper 3F

Time 1 hour 30 minutes

Mathematics
PAPER 3 (Calculator)
Foundation Tier

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator, Formulae Sheet (enclosed). Tracing paper may be used.

Total Marks

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.** If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

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.
  Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write 70% as a decimal.

.....

(Total for Question 1 is 1 mark)

2 Write down two factors of 60

.....

(Total for Question 2 is 1 mark)

3 What is the time 1 hour 30 minutes after 6.05 am?

..... am

(Total for Question 3 is 1 mark)

4 Work out $\frac{1}{5}$ of 85

.....

(Total for Question 4 is 1 mark)

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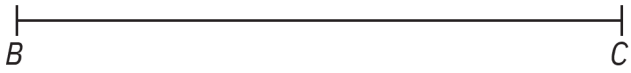
5 BC is a straight line.

Mark with a cross (X) the midpoint of BC



(Total for Question 5 is 1 mark)

6 (a) Simplify $a \times b \times 8$

.....

(1)

(b) Simplify $6x + 1 - x + 9$

.....

(2)

(Total for Question 6 is 3 marks)

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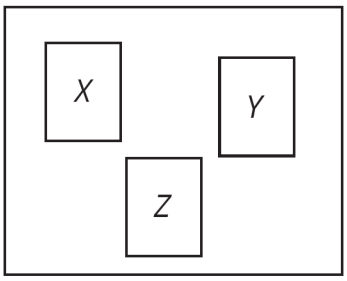
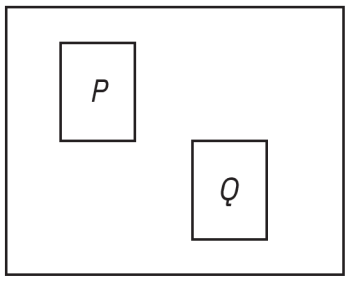
7 There are three cards in bag A and two cards in bag B.
There is a letter on each card.



Bag A



Bag B

Charlie takes a card from bag A and then a card from bag B.

List all the possible outcomes.

.....

.....

.....

(Total for Question 7 is 2 marks)

8 On Friday, Eeshu pays for 3 train tickets, 5 nights in a hotel, and 4 museum tickets.

	Pounds
Each train ticket costs	£80
Each night in a hotel costs	£90
Each museum ticket costs	£20

Show that Eeshu pays more than £900 on Friday.

(Total for Question 8 is 3 marks)

9 Anna has 60 vases. The vases are either small, medium, or large.
35 of the vases are ceramic.
6 of the 20 small vases are ceramic.
10 of the 15 medium vases are not ceramic.

Use this information to complete the two-way table.

Size of vase	Ceramic	Not-Ceramic	Total
Small			20
Medium			15
Large			
Total	35		60

(Total for Question 9 is 3 marks)

10 David has £250 to spend on DVDs.
Each DVD costs £6.75.

Work out the greatest number of DVDs David can buy.

.....

(Total for Question 10 is 3 marks)

11 (a) Write 215 minutes in hours and minutes.

..... hours ..... minutes

(2)

A train travels x miles in 3 hours.

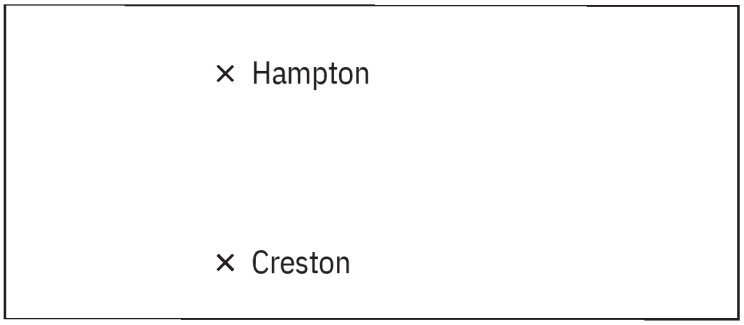
(b) Write down an expression, in terms of x, for the average speed of the train.

..... miles per hour

(1)

(Total for Question 11 is 3 marks)

12 The diagram shows two places on a map.



Scale: 1 centimetre represents 20 kilometres

(a) What is the actual distance, in kilometres, from Hampton to Creston?

..... kilometres
(2)

On a scale drawing, the scale is given as 1 : 1500

(b) How many metres does 6 centimetres represent on this drawing?

..... metres
(2)

(Total for Question 12 is 4 marks)

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13 In a nature reserve, the ratio of the area of forest to the area of grassland is 3 : 5

(a) Work out what percentage of the area of the nature reserve is forest.

..... %

(2)

In a different nature reserve, 25% of the area is grassland.

(b) Work out the ratio of the area of grassland to the area of other land types in this reserve.

.....

(2)

(Total for Question 13 is 4 marks)

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14 A shopping mall cost £450 million.

$\frac{3}{5}$ of this cost was for construction.

The rest of the cost was for other expenses.

Work out the cost of other expenses.

£..... million

(Total for Question 14 is 3 marks)

15 Sita measures all the angles around a point.

Her results are 43°, 165°, 63° and 85°

Explain why these results cannot be true.

.....

.....

.....

(Total for Question 15 is 1 mark)

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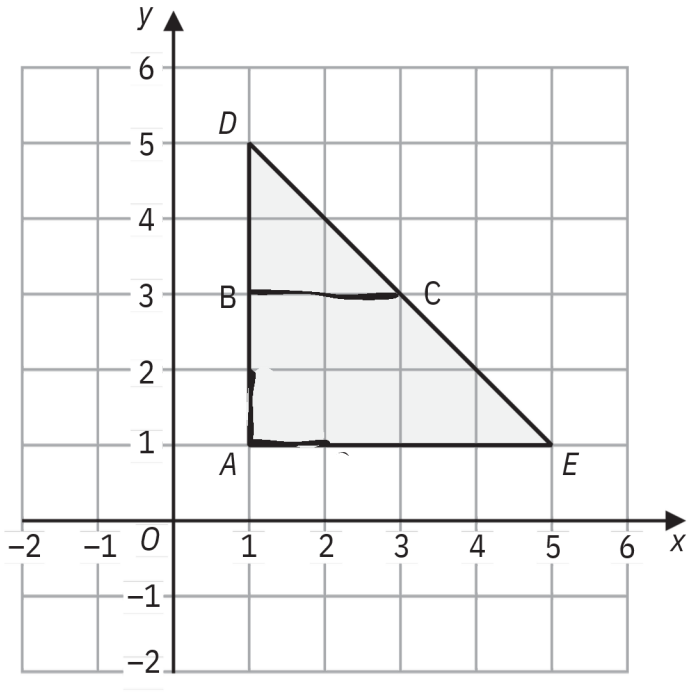
16 Here is a diagram showing triangle *DBC* and triangle *ADE*.



Describe fully the single transformation that maps triangle *DBC* onto triangle *ADE*.

.....

.....

.....

(Total for Question 16 is 2 marks)

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17 (a) Expand $x(x + 9)$

.....

(1)

(b) Factorise $3a-9$

.....

(1)

(c) Solve $2(6x + 4) = 20$

$x =$ .....

(3)

(d) Simplify $36 a^2b \times 2ab^2$

.....

(2)

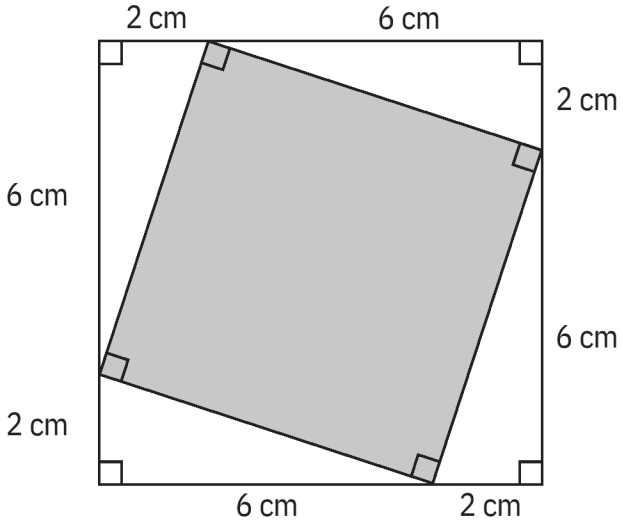
(Total for Question 17 is 7 marks)

18 Change 2 m2 into cm2

..... cm2

(Total for Question 18 is 1 mark)

19 This diagram shows two squares.



Work out the area of the square shown shaded in the diagram.

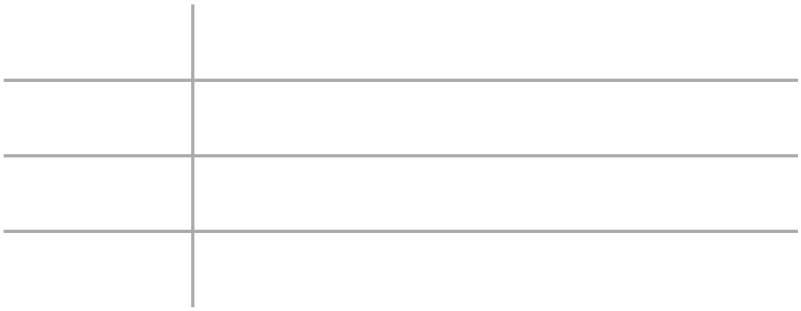
.....

(Total for Question 19 is 4 marks)

20 Here are the weights, in grams, of 12 fruits:

150, 120, 180, 160, 145, 170, 155, 135, 125, 175, 190, 165

Draw a stem and leaf diagram for these weights.



Key:

(Total for Question 20 is 3 marks)

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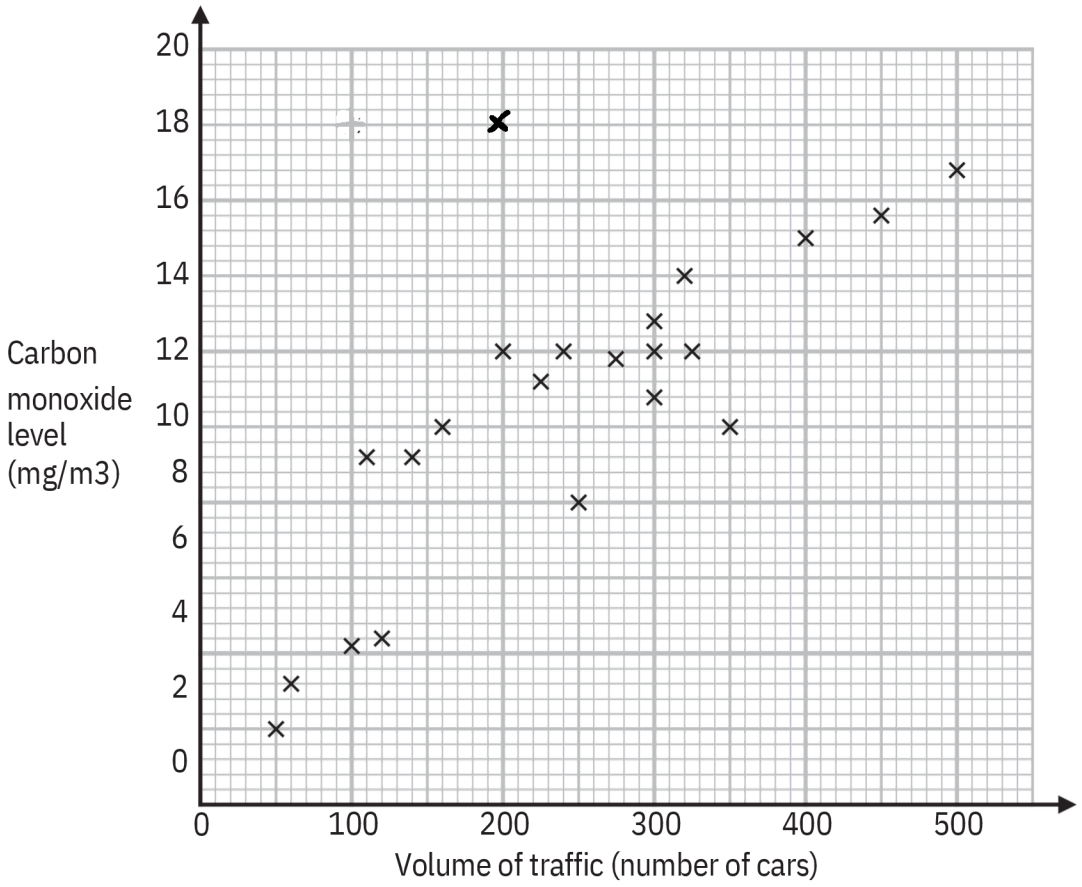
21 The scatter graph shows information about the volume of traffic and the carbon monoxide level at a point on a road each day for 22 days.



One point is an outlier.

(a) Write down the coordinates of this point.

(..... , ...)

(1)

For another day, 390 cars pass the point on the road.

(b) Estimate the carbon monoxide level for this day.

..... mg/m3

(2)

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Alfie says,

"Because there is an outlier, there is no correlation."

(c) Is Alfie correct?
You must give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 21 is 4 marks)

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22 Emily makes fruit smoothies in a café.

She mixes strawberries, bananas, and yogurt so that the

weight of strawberries : weight of bananas : weight of yogurt = 6 : 3 : 1.

Emily needs to make 4000 g of fruit smoothies.

Bananas cost £1.50 for 200 g.

Work out the cost of the bananas needed to make 4000 g of fruit smoothies

£.....

(Total for Question 22 is 4 marks)

23 (a) Write 6.5 × 109 as an ordinary number.

.....

(1)

(b) Write 0.0009 in standard form.

.....

(1)

(c) Work out $3.6 \times 10^2 + 4.7 \times 10^3$

Give your answer in standard form.

.....

(2)

(Total for Question 23 is 4 marks)

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24 A swimming pool is empty.
Jessica needs to fill the pool with 3000 litres of water.
Company X supplies water at a rate of 6 litres in 1 minute 30 seconds.
Company Y supplies water at a rate of 3 gallons per minute.

(1 gallon = 4.54 litres)

Company X would take more time to fill the pool than Company Y would take to fill the pool.
How much more time?

Give your answer in minutes, correct to the nearest minute.

..... minutes

(Total for Question 24 is 4 marks)

25 The first four terms of a geometric sequence are

b, 3b, 9b, 27b.

The sum of the first five terms of this sequence is 364.

Work out the value of b.

.....

(Total for Question 25 is 3 marks)

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26 In a jar, there are only yellow marbles, orange marbles, purple marbles, and black marbles.
A marble is going to be taken at random from the jar.

The table shows the probabilities of taking a yellow marble or an orange marble.

Colour	Yellow	Orange	Purple	Black
Probability	0.10	0.20	.....	.....

The probability of taking a purple marble is 0.25 more than the probability of taking a black marble.

(a) Complete the table.

(2)

There are 30 orange marbles in the jar.

(b) Work out the total number of marbles in the jar.

.....

(2)

(Total for Question 26 is 4 marks)

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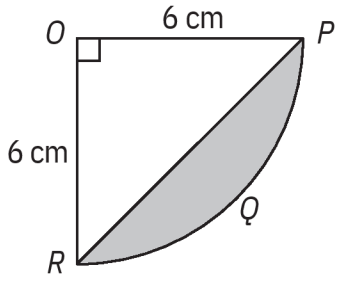
27 The diagram shows a sector $OPQR$ of a circle, centre O and radius 6 cm.



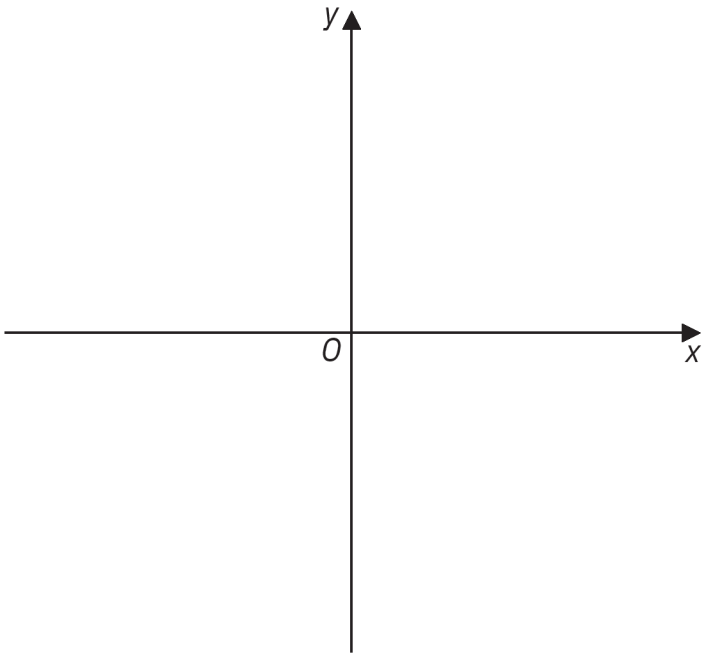
OPR is a triangle.

Work out the area of the shaded segment PQR.
Give your answer correct to 3 significant figures.

..... cm2

(Total for Question 27 is 4 marks)

28 Sketch the graph of $y = \frac{1}{x}$



(Total for Question 28 is 2 marks)

TOTAL FOR PAPER IS 80 MARKS