For Edexcel

Name

GCSE Mathematics

Unit 3 – Section A – (Non-Calculator)

Foundation Tier

Terminal Paper A

Time: 1 hour

Materials required

Ruler, protractor, compasses,
pen, pencil, eraser.
Tracing paper may be used.

Instructions and Information for Candidates

Write your name in the box at the top of the page.
Answer all the questions in the spaces provided in this question paper.
The marks for each question and for each part of a question are shown in brackets.
The total mark for this paper is 60. There are 16 questions in this paper.
Calculators must not be used.

Advice to Candidates

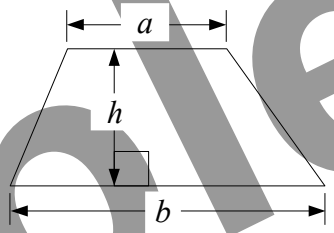
Show all stages in any calculation.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

Written by Shaun Armstrong

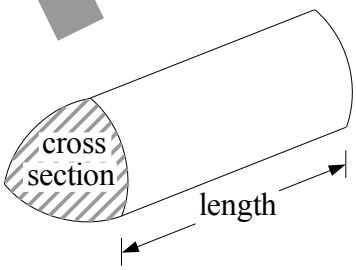
GCSE Mathematics

Formulae: Foundation Tier

Area of a trapezium = $\frac{1}{2}(a + b)h$



Volume of a prism = area of cross section × length



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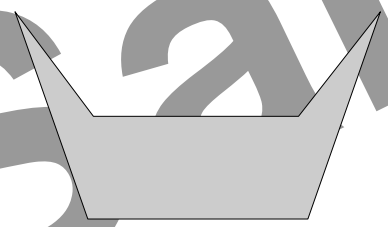
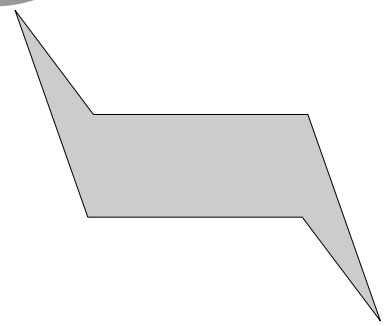
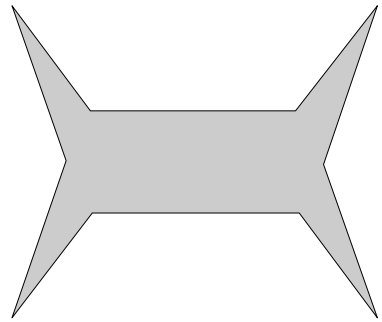
Answer ALL SIXTEEN questions.

Write your answers in the spaces provided.

You must NOT use a calculator.

You must write down all the stages in your working.

1. Tick (✓) each box in the table below if the shape has the stated symmetry.

	Exactly one line of symmetry	Exactly two lines of symmetry	Rotational symmetry of order 2
			
			
			

Q1

(Total 4 marks)

Leave Blank

2. (a) Work out $\frac{1}{4}$ of 48

.....

(1)

(b) Work out $\frac{3}{8}$ of 40

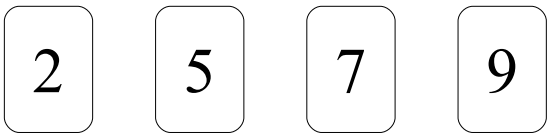
.....

(2)

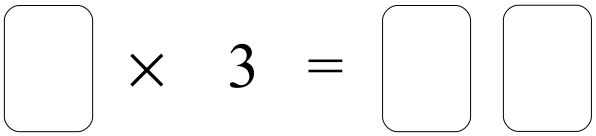
(Total 3 marks)

Q2

3. Rick is given these four number cards.



(a) Show how he can use three of the cards to make this a correct calculation.



(2)

(b) Show how he can use all four cards to make this a correct calculation.

(2)

(Total 4 marks)

Q3

Leave Blank

4. Here are some fractions.

$\frac{1}{2}$ $\frac{1}{4}$ $\frac{7}{8}$ $\frac{3}{4}$ $\frac{1}{5}$ $\frac{2}{3}$

Write down the fraction from this list that is

(a) the largest,

..... **(1)**

(b) equal to 75%,

..... **(1)**

(c) closest in value to $\frac{3}{5}$,

..... **(1)**

(d) closest in value to 0.23

..... **(1)**

Q4

(Total 4 marks)

Leave Blank

5. Here are the ingredients for making 6 pots of chocolate mousse.

Ingredients

6 eggs

30 g of butter

320 g of chocolate

a pinch of salt

Frank has to make 12 pots of chocolate mousse.

(a) How much chocolate does he need?

..... g
(2)

Later on, Frank needs to make 4 more pots.

(b) Work out how much butter he needs to make 4 pots of chocolate mousse.

..... g
(2)

(Total 4 marks)

Q5

Leave Blank

6.

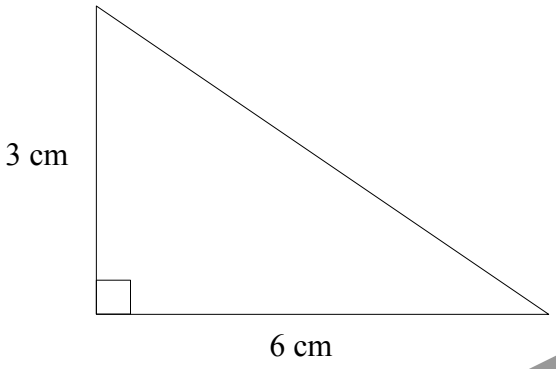


Diagram **NOT** accurately drawn

The diagram shows a right-angled triangle.

(a) Work out the area of the triangle.

..... cm^2
(2)

The triangle is the cross-section of a prism of length 8 cm.

(b) Work out the volume of the prism.

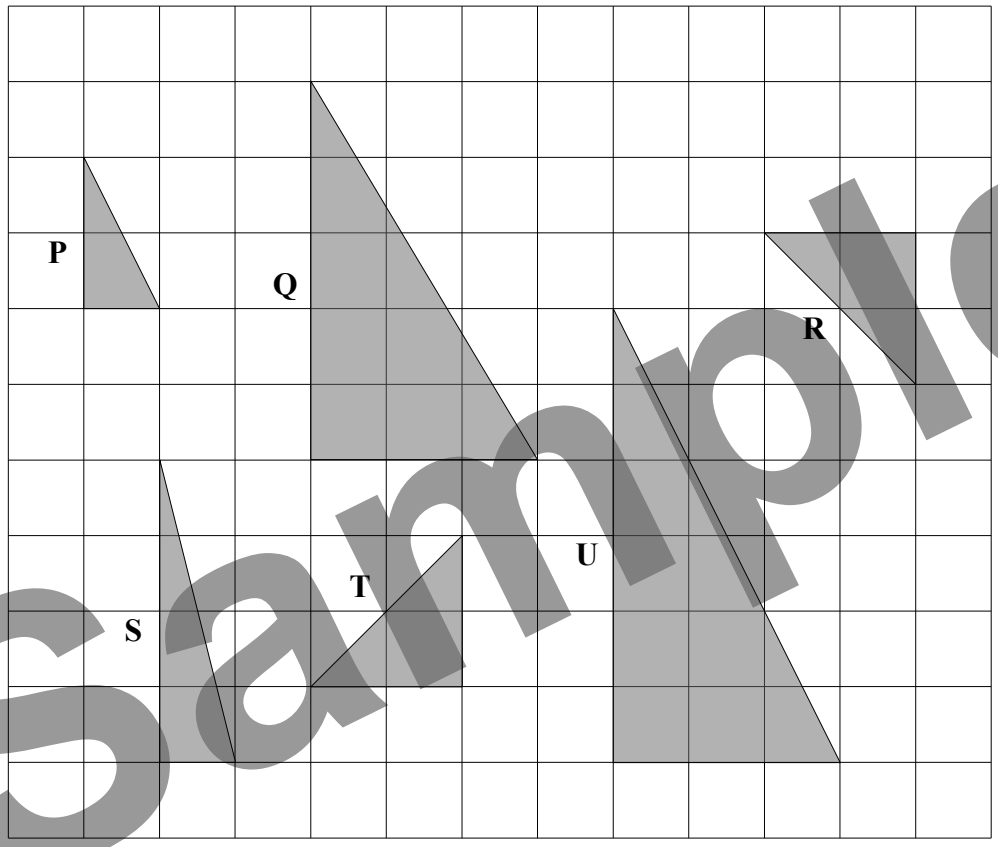
..... cm^3
(2)

(Total 4 marks)

Q6

Leave Blank

7.



Six right-angled triangles are shown on the grid.

(a) Which two triangles are congruent?

…… and ……

(1)

(b) (i) Which triangle is an enlargement of triangle **P?**

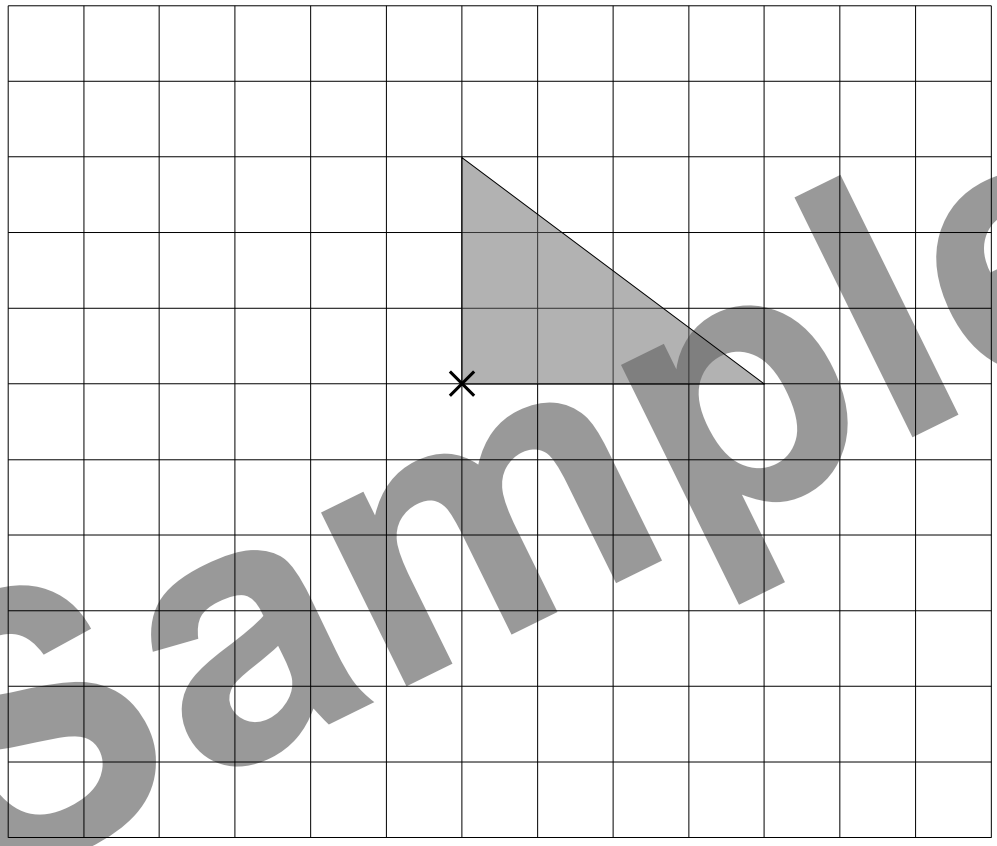
……

(ii) Write down the scale factor of the enlargement.

……

(2)

Leave Blank



(c) On the grid, rotate the shaded triangle 90° clockwise about the point marked with a cross.

(2)

(Total 5 marks)

Q7

8. (a) Work out the value of $2^3 \times 10^2$

.....

(2)

(b) Write as a power of 5

(i) $5^2 \times 5^4$

.....

(ii) $5^{10} \div 5^3$

.....

(2)

(Total 4 marks)

Q8

Leave Blank

9. Solve

(a) $a + 5 = 11$

$a =$ .....

(1)

(b) $2t - 1 = 19$

$t =$ .....

(2)

(c) $5p + 9 = p - 3$

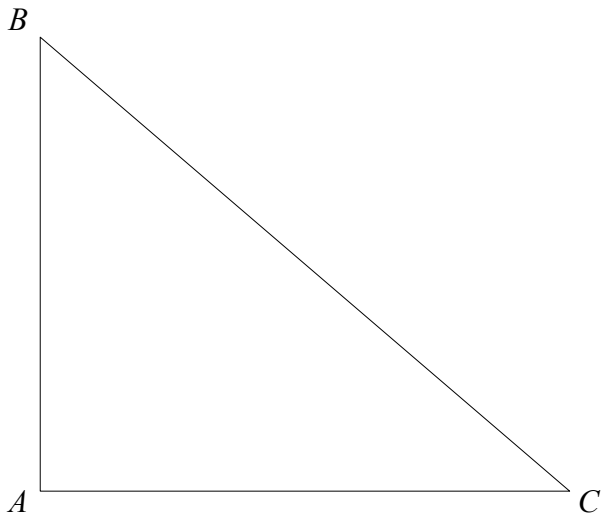
$p =$ .....

(3)

(Total 6 marks)

Q9

10.



ABC is a triangle.

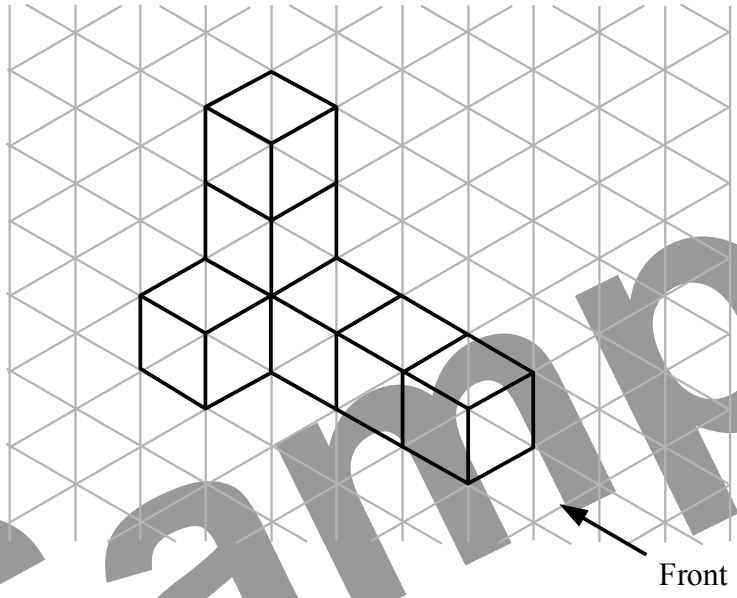
Shade the region inside the triangle which is less than 4 cm from the point *C*.

(Total 2 marks)

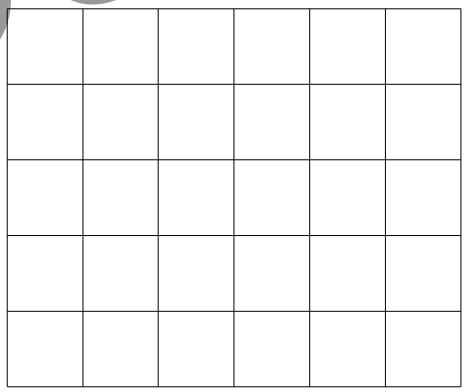
Q10

Leave Blank

11. The diagram shows a 3-D shape made from cubes.

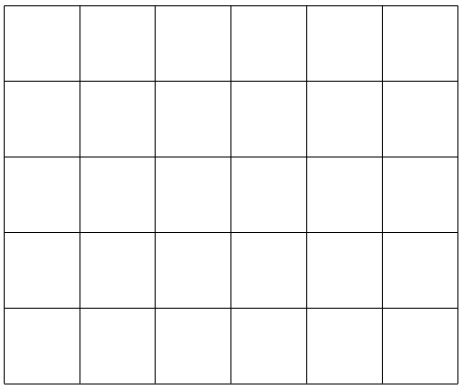


(a) On the grid, draw the front elevation of the shape from the direction shown.



(2)

(b) On the grid, draw the plan of the shape.



(2)

(Total 4 marks)

Q11

Leave Blank

12. The cost, in pounds, of taking a computing course is worked out using this formula.

Cost of course = 15 × Number of lessons + 25

Adam takes a course that has 10 lessons.

(a) Work out how much Adam pays for his course.

£ .....

(2)

Eve pays £115 for a taking a different course.

(b) Work out how many lessons there are in Eve's course.

.....

(2)

(Total 4 marks)

Q12

Leave Blank

13. Adrian is a waiter.

At one of his tables the bill is for £72.
The customer at this table gives Adrian a tip of 10% of the bill.

At another of his tables the bill is for £60.
The customer at this table gives Adrian a tip of 15% of the bill.

Work out how much more Adrian gets as a tip from the second table than from the first table.

£ .....

Q13

(Total 4 marks)

14. The table shows the temperature recorded at various times in one day.

Time	8 am	10 am	12 noon	2 pm	4 pm	6 pm
Temperature	–3 ℃	1 ℃	4 ℃	5 ℃	3 ℃	–1 ℃

(a) How much did the temperature increase by between 8 am and 10 am?

..... ℃

(1)

(b) How much did the temperature decrease by between 2 pm and 6 pm?

..... ℃

(1)

The temperature decreased by 3 ℃ between 6 pm and 8 pm.

(c) Work out the temperature at 8 pm.

..... ℃

(1)

Q14

(Total 3 marks)

Leave Blank

15. $-1 \leq x < 3$

x is an integer.

Write down all the possible values of x.

..... **Q15**

(Total 2 marks)

16.

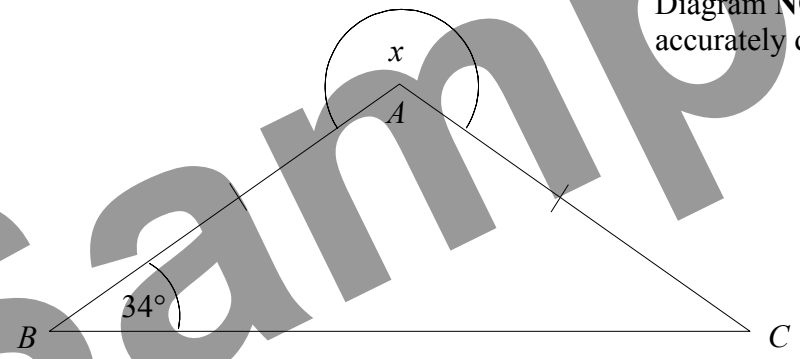


Diagram **NOT** accurately drawn

In the diagram, $AB = AC$ and angle $ABC = 34°$.

Find the size of the angle marked x.

°

..... **Q16**

(Total 3 marks)

TOTAL FOR SECTION: 60 MARKS

END

