Edexcel GCSE

Mathematics (Modular) – 2381

Paper 11 (Non-Calculator)

Foundation Tier

Unit 3

Tuesday 9 November 2010 – Morning

Time: 1 hour

Materials required for examination
Ruler graduated in centimetres and
millimetres, protractor, compasses,
pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
You must NOT write on the formulae page.
Anything you write on the formulae page will gain NO credit.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 21 questions in this question paper. The total mark for this paper is 60.
There are 16 pages in this question paper. Any blank pages are indicated.
Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.
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.

Turn over
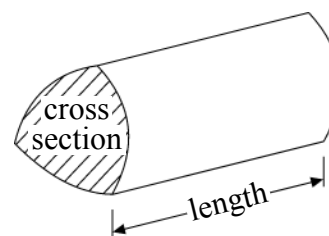
GCSE Mathematics 2381

Formulae: Foundation Tier

You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.

Area of trapezium = $\frac{1}{2}(a+b)h$
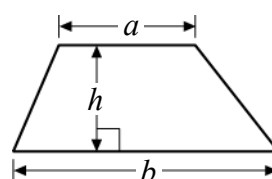
Volume of prism = area of cross section × length

Answer ALL TWENTY ONE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. Complete this bill.

Joe's Car Shop

Item	Number of items	Costs of one item	Total
Spanner	2	£3.99	£7.98
De-icer	4	£1.50	£....................
Wiper blade	2	£....................	£9.00
		Total cost	£....................
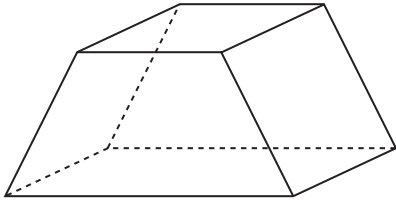
(Total 3 marks)

2. Here is a diagram of a prism.

Write down the number of

(i) faces

....

(ii) edges

....

(iii) vertices

....

(Total 3 marks)

3. $d = 6$

(a) (i) Work out the value of $3 + d$

....

(ii) Work out the value of $2d$

....

(2)

$h = 3f + 4g$

$f = 2$
$g = -1$

(b) Work out the value of h

$h =$ ....

(2)

(Total 4 marks)

4. (a) On the shape, draw all the lines of symmetry.

(2)

The shape below has rotational symmetry.

(b) Write down the order of rotational symmetry.

....
(1)

(Total 3 marks)

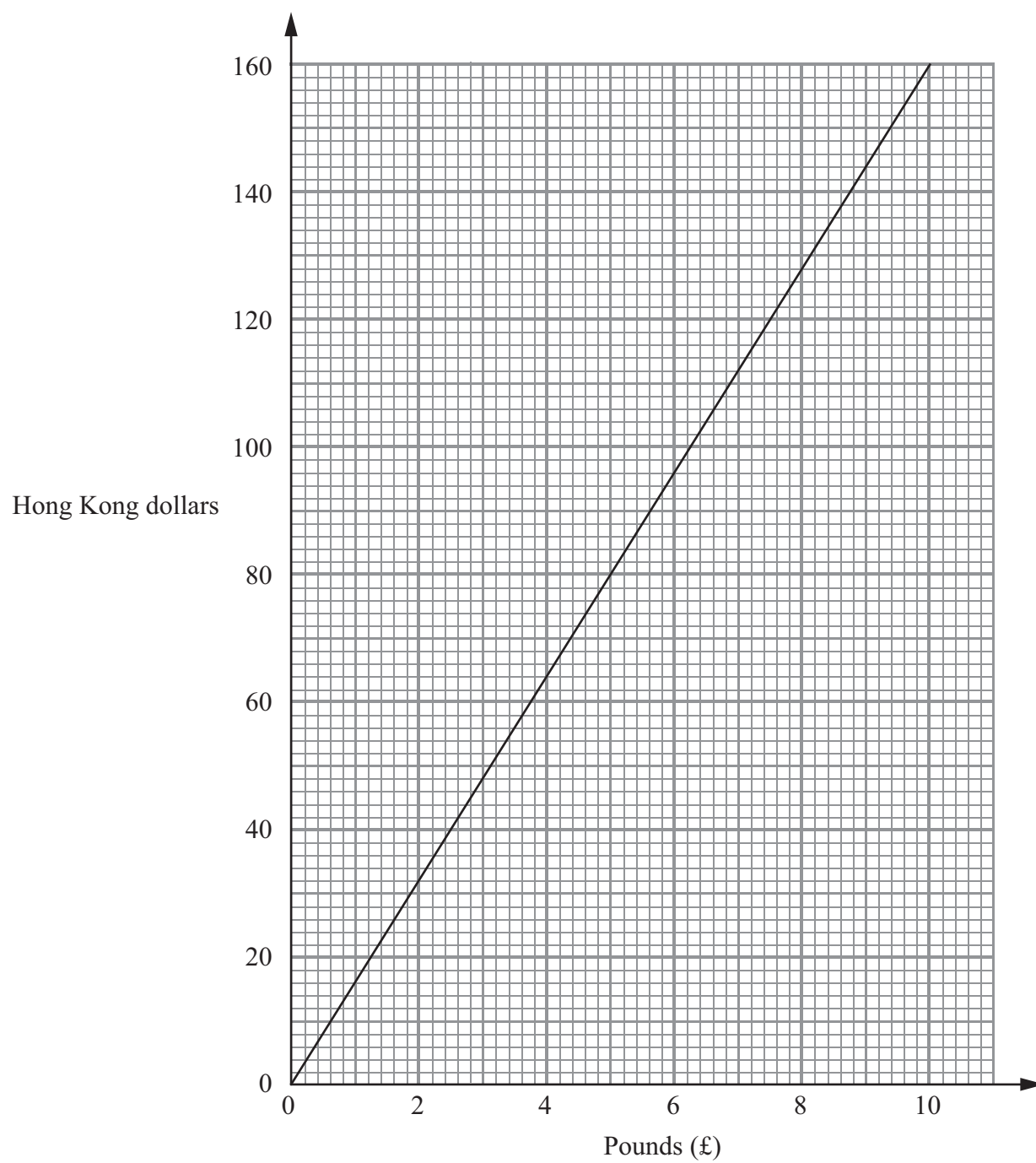**5.** This graph can be used to change between pounds (£) and Hong Kong dollars.

(a) Use the graph to change £5 to Hong Kong dollars.
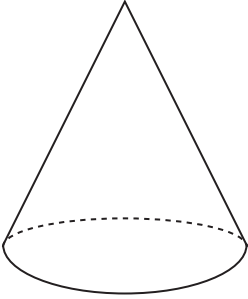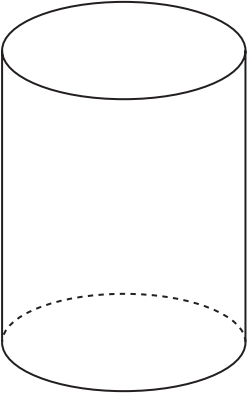
..........................Hong Kong dollars

(1)

(b) Use the graph to change 120 Hong Kong dollars to pounds.

£....................................

(1)

(Total 2 marks)

6. Write down the mathematical name of each of these solid shapes.

(i) ....

(ii) **Q6**

(Total 2 marks)

7. Change $\frac{3}{5}$ into a decimal.

.... **Q7**

(Total 2 marks)

8. (a) Work out the value of

(i) $-3 + 7$

....

(ii) $4 - 6$

....

(2)

(b) Work out the value of

(i) $-10 \div 5$

....

(ii) -3×-4

....

(2) **Q8**

(Total 4 marks)

9.

Diagram **NOT**
accurately drawn

$a°$

$a° - 30°$

$a°$

The diagram shows a triangle.

The size of the angles, in degrees, are
a
a
$a - 30$

Work out the value of a.

$a =$ ....

(Total 3 marks)

10. (a) Solve $p + p + p = 15$

$p =$ ....
(1)

(b) Solve $f + 5 = 8$

$f =$ ....
(1)

(Total 2 marks)

11. (a) Mark the midpoint of the line *AB* with a cross (×).
Label the midpoint with the letter *P*.

(1)

A ——————————————————— *B*

(b) Use the point *P* to draw a circle with a radius of 5 cm.

(2)   Q11

(Total 3 marks)

12. There are 150 tissues in a box.

Susie uses $\frac{2}{5}$ of these tissues.

How many tissues are there now in the box?

.... tissues   Q12

(Total 3 marks)

Turn over

13. Jonty invests £500 for 2 years at 4% **simple interest** each year.

Work out the total amount of interest Jonty gets.

£ ....

(Total 2 marks)

14. Work out 451 × 23

....

(Total 3 marks)

15. There are 540 workers in a factory.

240 of the workers are female.

15% of **male** workers are more than 50 years of age.

Work out the number of male workers that are more than 50 years of age.

....

(Total 3 marks)

16. (a) On the number line below mark the inequality $-1 < y < 4$

$$\overset{}{\underset{-4\quad -3\quad -2\quad -1\quad 0\quad 1\quad 2\quad 3\quad 4\quad 5\quad y}{\longrightarrow}}$$
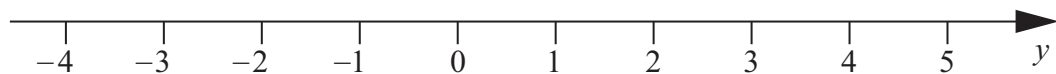
(1)

(b) Here is an inequality, in x, shown on a number line.

$$\overset{\circ\!-\!\!-\!\!-\!\!-\!\!-\!\!\bullet}{\underset{-4\quad -3\quad -2\quad -1\quad 0\quad 1\quad 2\quad 3\quad 4\quad 5\quad x}{\longrightarrow}}$$

Write down the inequality.

....

(2)

(c) Solve the inequality $3t + 5 > 17$

....

(2)

Q16

(Total 5 marks)

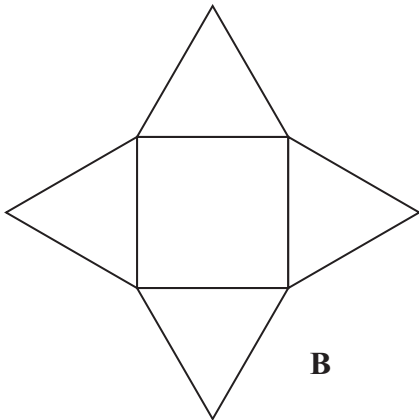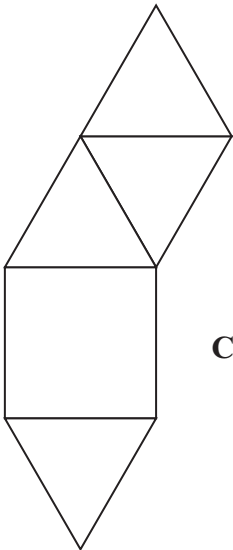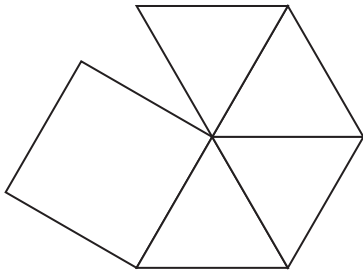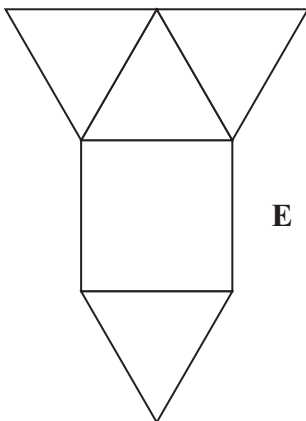**17.** Here are 5 diagrams.
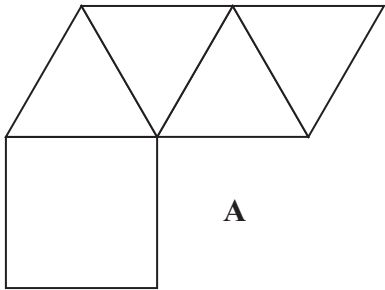
A

B

C

D

E

Two of these diagrams show a net for a square-based pyramid.

Write down the letter of each of these two diagrams.

.... and ....

(Total 2 marks)

18. There are 24 students in a dance class.
6 of the students are boys.
18 of the students are girls.

Write, as a ratio, the number of boys to the number of girls in the dance class.
Give your answer in its simplest form.

....

(Total 2 marks)

Turn over

19. Work out $\quad 3\dfrac{4}{5} - 1\dfrac{1}{4}$

....

(Total 3 marks)

20. Use ruler and compasses to **construct** the perpendicular bisector of the line *AB*.
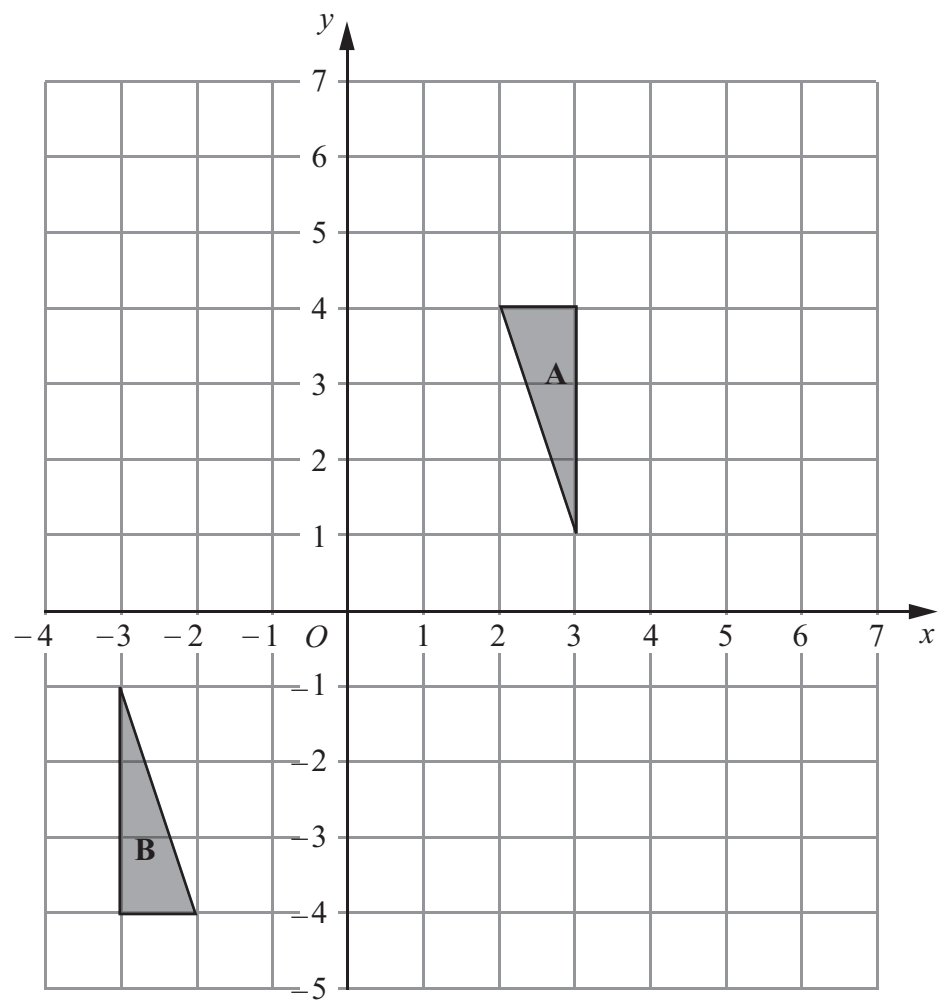
You must show all your construction lines.

A ——————————————— B

(Total 2 marks)

21.

Triangle **A** and triangle **B** are drawn on the grid.

(a) Describe fully the single transformation which maps triangle **A** onto triangle **B**.

....

....

(3)

(b) Translate triangle **A** by the vector $\begin{pmatrix} 3 \\ 0 \end{pmatrix}$.

Label the new triangle **C**.

(1)

Q21

(Total 4 marks)

TOTAL FOR PAPER: 60 MARKS

END

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