

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
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12 – 13	
14 – 15	
16	
TOTAL	



General Certificate of Secondary Education
Foundation Tier

Mathematics (Linear) B

4365/1F

Paper 1 Non-calculator

F

Practice Paper 2012 Specification (Set 1)

<p>For this paper you must have:</p> <ul style="list-style-type: none"> mathematical instruments. <p>You must not use a calculator.</p>	
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Time allowed

- 1 hour 15 minutes

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work that you do not want to be marked.

Information

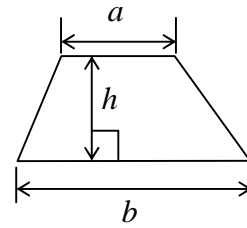
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 70.
- The quality of your written communication is specifically assessed in questions 8 and 11.
These questions are indicated with an asterisk (*).
- You may ask for more answer paper, graph paper and tracing paper.
These must be tagged securely to this answer booklet.

Advice

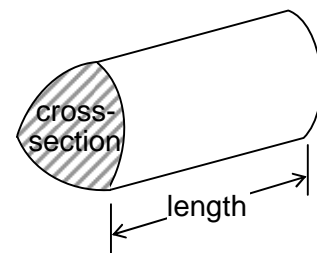
- In all calculations, show clearly how you work out your answer.

Formulae Sheet: Foundation Tier

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



Volume of prism = area of cross-section \times length



Answer **all** questions in the spaces provided.

1 Work out

1 (a) $136 + 82$

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Answer (1 mark)

1 (b) $250 - 116$

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Answer (1 mark)

1 (c) 13×5

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Answer (1 mark)

1 (d) $256 \div 8$

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Answer (1 mark)

2 (a) Write 3642 in words.

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(1 mark)

2 (b) Round 3642 to the nearest 100.

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Answer (1 mark)

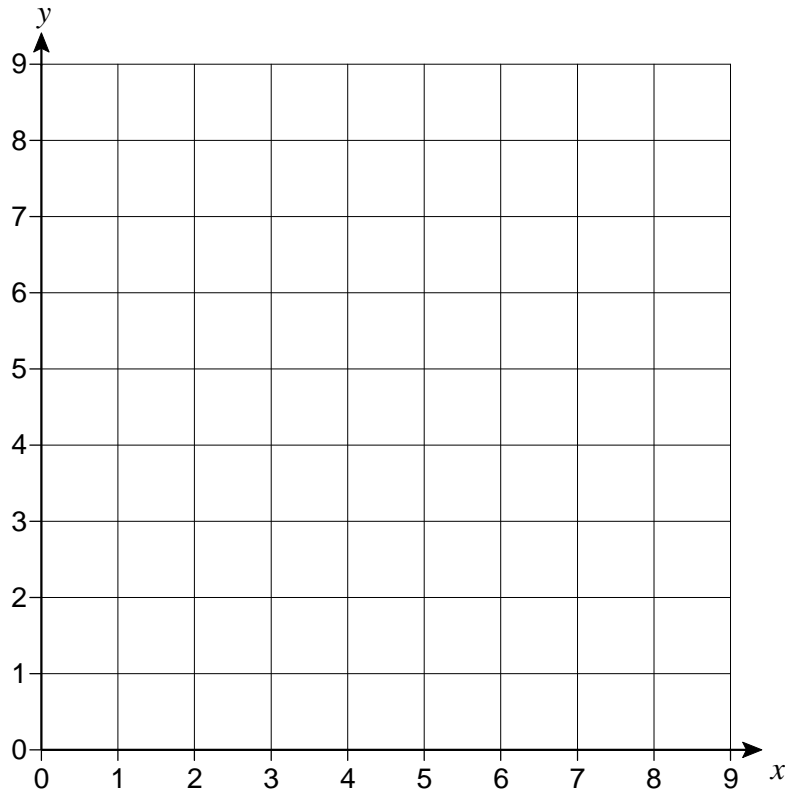
2 (c) A rugby ground seats five thousand people.
3642 people watch a match at the rugby ground.

How many **empty** seats are there?

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.....
Answer (2 marks)

- 3 (a)** On the centimetre grid, plot the points $A(3, 1)$ and $B(6, 7)$.

Label the points.



(2 marks)

- 3 (b)** Measure the line AB .

Answer cm (1 mark)

- 3 (c)** Write down the coordinates of any point on the line AB , that is nearer to A than to B .

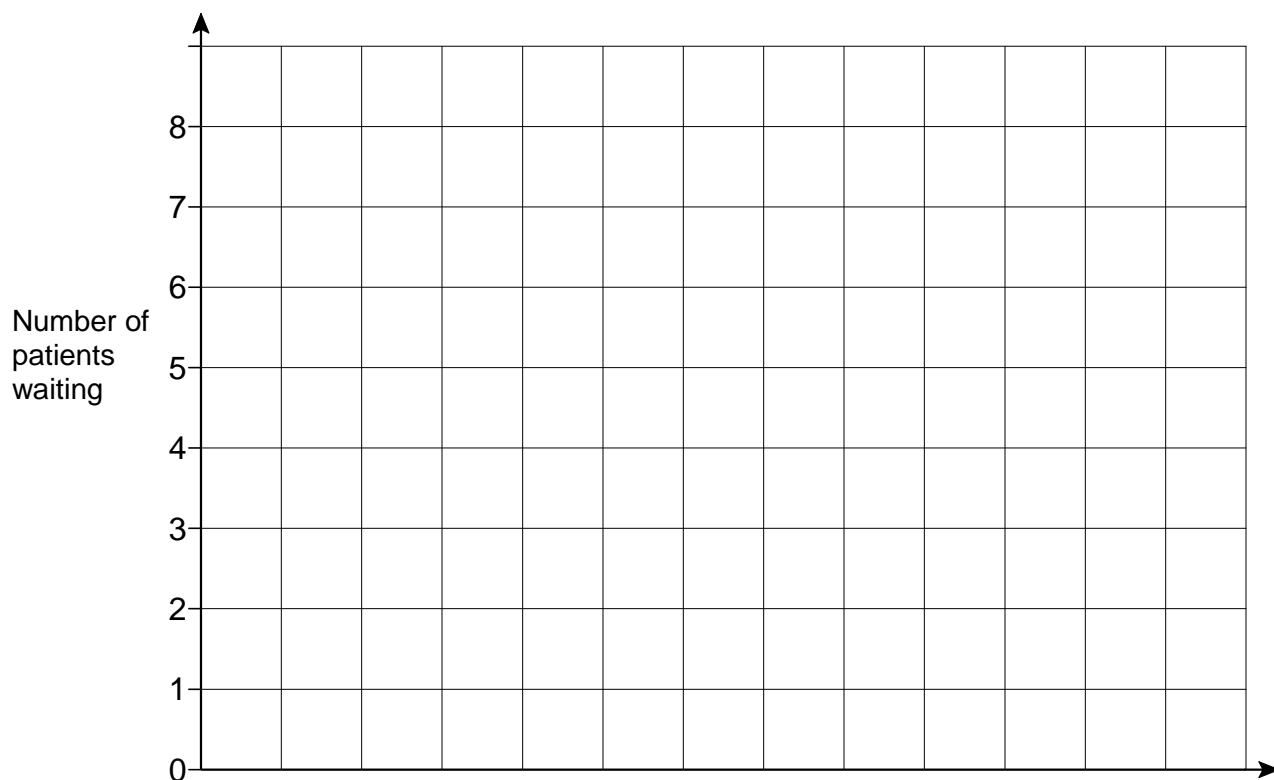
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Answer (.....,) (1 mark)

- 4** A doctor's surgery opens at 8.15 am.
The number of patients waiting at 8.15 am to make appointments is recorded.

Day	Mon	Tue	Wed	Thu	Fri	Sat
Number of patients waiting	8	6	5	4	3	4

- 4 (a)** Draw a suitable diagram on the grid to show this information.



(3 marks)

- 4 (b) (i)** Work out the range of the number of patients waiting.

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Answer (1 mark)

- 4 (b) (ii)** Work out the mean of the number of patients waiting.

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Answer (2 marks)

- 4 (c)** The surgery starts an on-line appointments system.
Patients can make an appointment on-line or wait at 8.15 am.
This is the data for the week after the new system is started.

Range of number of patients waiting at 8.15 am	2
Mean of number of patients waiting at 8.15 am	3

Make **two** comparisons of these results with those before the on-line system started.

Comparison 1

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Comparison 2

.....

.....

(2 marks)

- 5** The amount 3p can be made in **two** different ways.

$$3p = 1p + 1p + 1p$$

$$\text{and } 3p = 2p + 1p$$

Write down the **five** different ways of making 6p.

$$6p = \dots\dots\dots$$

$$6p = \dots\dots\dots$$

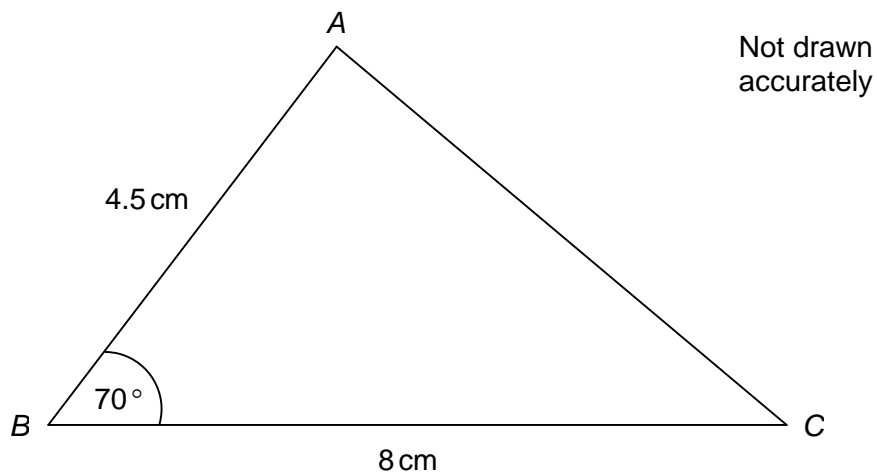
$$6p = \dots\dots\dots$$

$$6p = \dots\dots\dots$$

$$6p = \dots\dots\dots$$

(2 marks)

- 6 (a) A sketch of triangle ABC is shown.



Angle $ABC = 70^\circ$

What type of angle is ABC ?

Circle the correct answer.

Acute

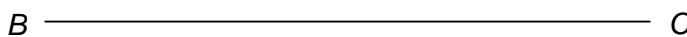
Right angle

Obtuse

Reflex

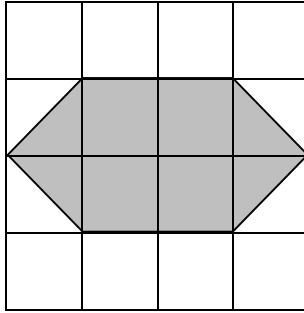
(1 mark)

- 6 (b) Make an accurate drawing of the triangle ABC .
The side BC has been drawn for you.



(2 marks)

7 (a) What fraction of this grid is shaded?

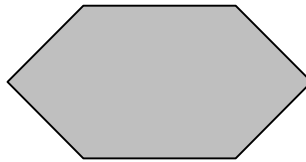


Give your answer in its simplest form.

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Answer (2 marks)

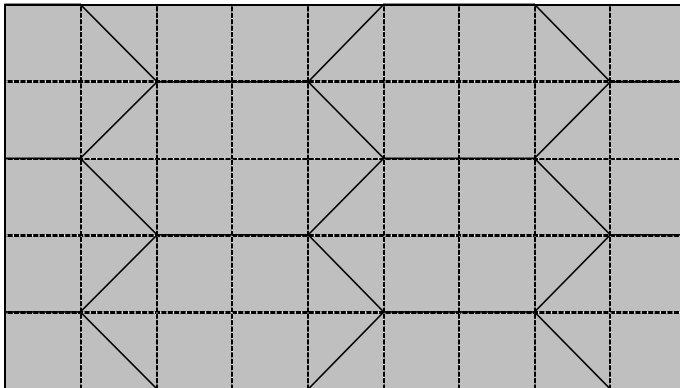
7 (b) Here is a tile.



Not drawn
accurately

Some of these tiles are used to cover a floor as shown.

The tiles can be cut.



Not drawn
accurately

What is the smallest number of tiles you need to buy to cover the floor?

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Answer (2 marks)

***8** Mila is organising a trip to the theatre for 100 people.

8 (a) Mila is given 10 free tickets.
The rest of the tickets are £6.00 each.

The total cost of the tickets is shared equally between all 100 people.

How much will each person pay?

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Answer £..... (3 marks)

8 (b) A minibus holds 11 passengers and costs £60
A coach holds 58 passengers and costs £285

Work out the cheapest method of getting 100 people to the theatre.

Show your working clearly.

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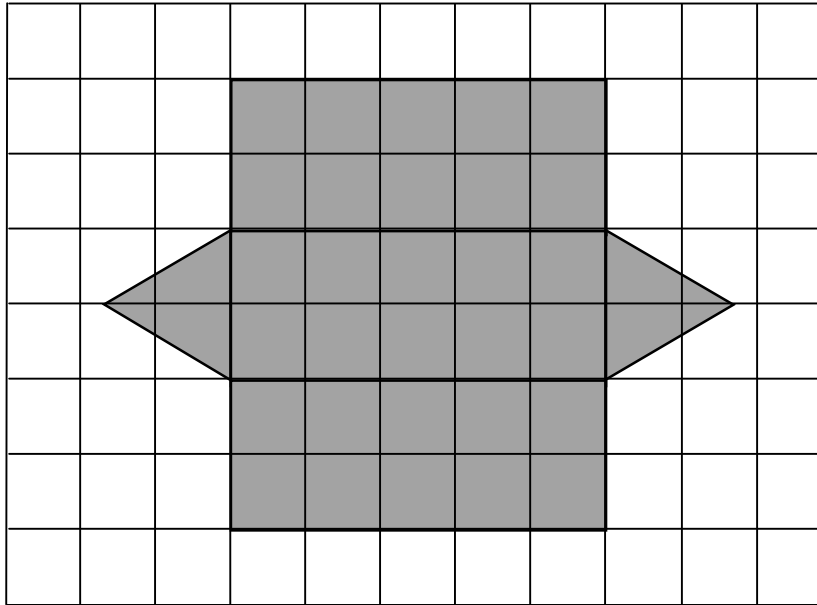
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(4 marks)

9 The net of a solid is shown on the centimetre grid.



9 (a) What is the name of the solid?
Circle the answer.

Tetrahedron

Pyramid

Cuboid

Triangular Prism

(1 mark)

9 (b) (i) The area of each triangle is 1.7 cm^2 .
Work out the total area of the net.

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Answer cm^2 (3 marks)

9 (b) (ii) Work out the volume of the solid.

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Answer cm^3 (2 marks)

10 Two-thirds of a number is 60

What is 50% of the same number?

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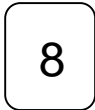











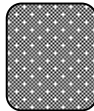
Answer (3 marks)

***11**

Here are two sets of cards.

The numbers in set A are different.

The numbers in set B are different.

Set A							
Set B							

Both sets have the same median.

One card in set B is turned over.

What number could be on this card?

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Answer (4 marks)

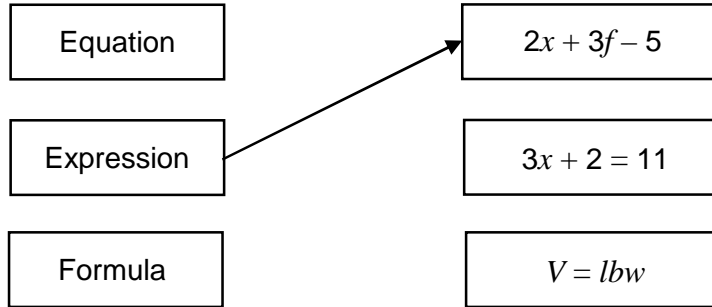
12 (a) Simplify $2x + 3x - x$

Answer (1 mark)

12 (b) How many terms are in the expression $2x + 3f - 5$?

Answer (1 mark)

12 (c) Join each box on the left with the matching box on the right.
One has been done for you.



(1 mark)

13 A sensor records the temperature at 7 am.
It then records the temperature every 3 hours.
Another sensor records the air pressure at 8 am.
It then records the air pressure every 4 hours.

At what times in every 24-hour period will the two sensors take readings at the same time?

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Answer (3 marks)

- 14** The table shows the activities on a trip.
Each student chooses **two** activities.

Twice as many boys as girls choose rock climbing.

Two more boys choose archery than choose horse riding.

Five times more girls choose horse riding than choose archery.

	Rock climbing	Horse riding	Archery
Girls	8		4
Boys		10	

How many students are on the trip altogether?

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Answer (5 marks)

- 15** In a wood half of the trees are Oak.
30% of the trees are Sycamore.
The rest are Elm.

- 15 (a)** Write the ratio of the number of Oak : Sycamore : Elm
Give your answer in its simplest form.

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Answer : : (2 marks)

- 15 (b)** One-fifth of the Oak trees and half of the Sycamore trees are cut down.
Work out the new ratio of the number of Oak : Sycamore : Elm
Give your answer in its simplest form.

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Answer : : (2 marks)

- 16** Solve the equation $\frac{5}{6} + d = 1\frac{3}{4}$

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Answer $d =$ (3 marks)

Turn over for the next question

17 Three friends are talking about regular polygons.

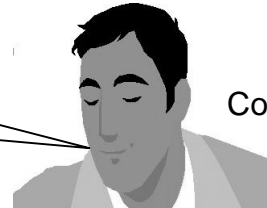
Alison



The exterior angle of a regular pentagon is 72°

A regular decagon has twice as many sides as a pentagon.
So the exterior angle must be $72^\circ \div 2$

Colin



A regular decagon has twice as many sides as a pentagon.
So the exterior angle must be $2 \times 72^\circ$

Ben



Is Ben or Colin correct?

Tick your answer.

Ben

Colin

You **must** show your working.

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(3 marks)

END OF QUESTIONS