Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Pages	Mark
3	
4 – 5	
6 – 7	
8 – 9	
10 – 11	
12 – 13	
14 – 15	
16 – 17	
18 – 19	
20 – 21	
22	
TOTAL	

General Certificate of Secondary Education
Foundation Tier

Mathematics (Linear) B 4365/1F

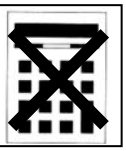
Paper 1 Non-calculator

F

Practice Paper 2012 Specification (Set 3)

For this paper you must have:
- mathematical instruments.

You must **not** use a calculator.



Time allowed
- 1 hour 15 minutes

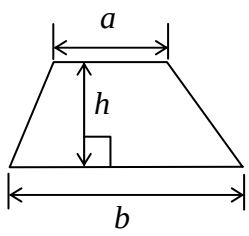
Instructions
- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this 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 4, 9, 13 and 16.
  These questions are indicated with an asterisk (✶).
- You may ask for more answer paper, tracing paper and graph paper.
  These must be tagged securely to this answer booklet.

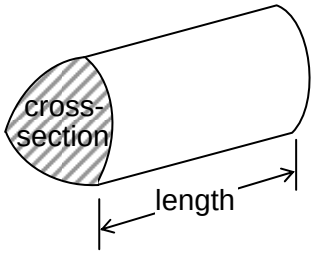
Advice
- In all calculations, show clearly how you work out your answer.

Formulae Sheet: Foundation Tier

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



Volume of prism = area of cross-section × length



Do not write outside the box

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

1 (a) Work out 432 + 897

Answer ..... (*1 mark*)

1 (b) Work out 795 – 278

Answer ..... (*1 mark*)

1 (c) Work out 9 × 32

Answer ..... (*1 mark*)

1 (d) Work out 135 ÷ 5

Answer ..... (*1 mark*)

4

2 (a) Write the number 7393 in words.

Answer .....

..... (*1 mark*)

2 (b) What is the value of the digit 6 in 567?

Answer ..... (*1 mark*)

2 (c) Write the number five thousand and seven in figures.

Answer ..... (*1 mark*)

3 Draw the lines of symmetry on the rectangle.

(*2 marks*)

Do not write outside the box

*** 4** Mr Brain has a paper delivered every day.

From Monday to Saturday the paper costs £1 each day.
On Sunday the paper costs £2.20
The delivery charge is 10p each day.

What is Mr Brain's weekly bill for his papers?

.....

.....

.....

.....

.....

.....

.....

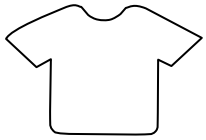
.....

Answer £ ……..... *(3 marks)*

Turn over for the next question

8

5 Timmy has three T-shirts.

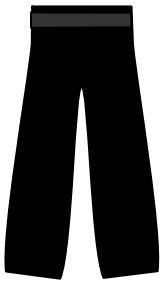


Plain

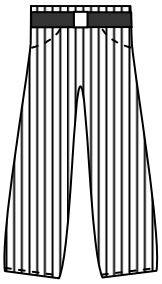
Spotted

Checked

He has two pairs of jeans.



Black



Striped

Today he is wearing the plain T-shirt and black jeans.

5 (a) Complete the table to show the **six** different combinations he could wear.

T-shirt	Jeans
Plain	Black

(*2 marks*)

5 (b) Timmy buys a pair of blue jeans.

How many combinations are there now?

Explain your answer.

Answer ..... *(1 mark)*

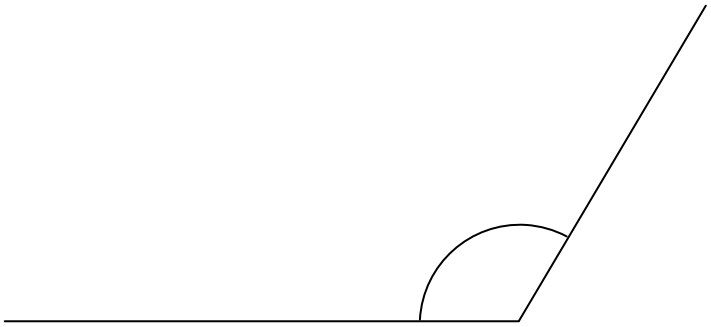
Turn over for the next question

3

6 (a) Draw an angle of 50^{o}.

(1 mark)

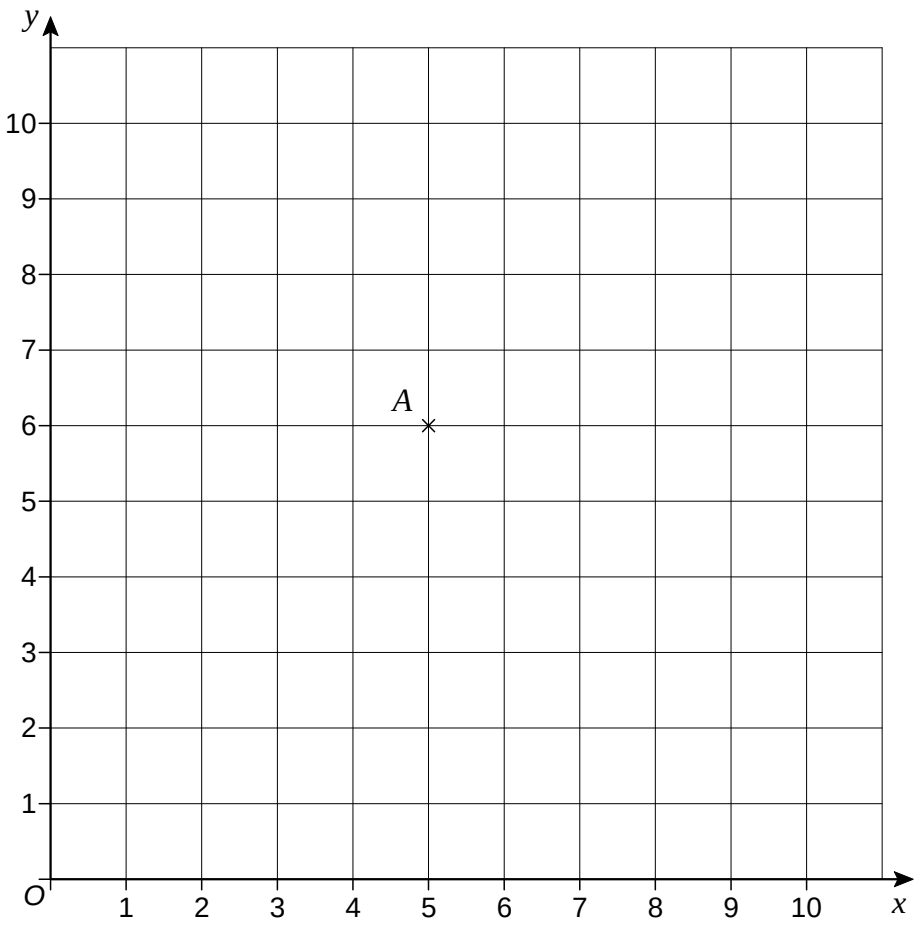
6 (b) Measure the obtuse angle.



Answer .....degrees *(1 mark)*

Do not write outside the box

7



7 (a) Write down the coordinates of A.

Answer (……, ……) (*1 mark*)

7 (b) Plot B (5, 2). *(1 mark)*

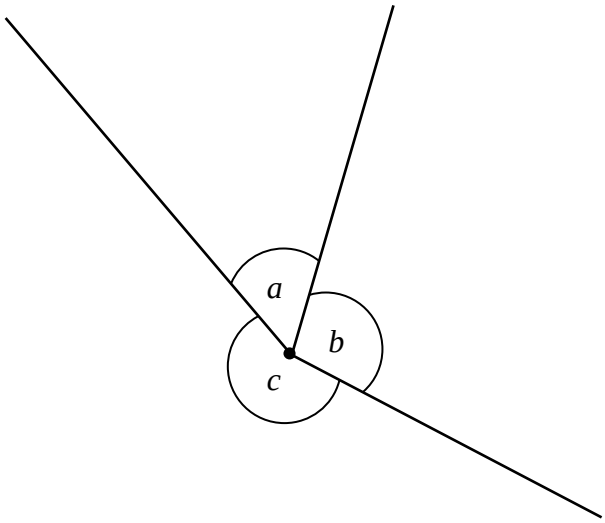
7 (c) A and B are two corners of a square.

Work out the possible coordinates of the other two corners.

Answer (……, ……) and (……, ……) (*2 marks*)

6

8 a is an acute angle.
b is an obtuse angle.
c is a reflex angle.



Work out possible values for a, b and c.

a = …….. degrees

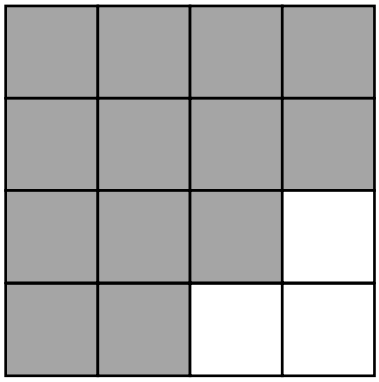
b = …….. degrees

c = …….. degrees

(3 marks)

Do not write outside the box

***9**



Is more than 75% of this diagram shaded?

You **must** show your working.

.....

.....

.....

(*3 marks*)

10 Draw ● , ■ or ▲ on each card so that

the mode is ● ,

the probability of picking a ■ is greater than the probability of picking a ▲ .

(*2 marks*)

8

11 Billy is paid £6 per hour.
He is given a 10% pay rise.

How much **extra** will he earn for 5 hours work after the pay rise?

.....

.....

.....

.....

.....

Answer £ ..... *(3 marks)*

12 There are 13 members in a choir.

The youngest member is 16 years old.
The median age is 24 years.
The oldest is 35 years old.

Draw an ordered stem-and-leaf diagram for their possible ages.

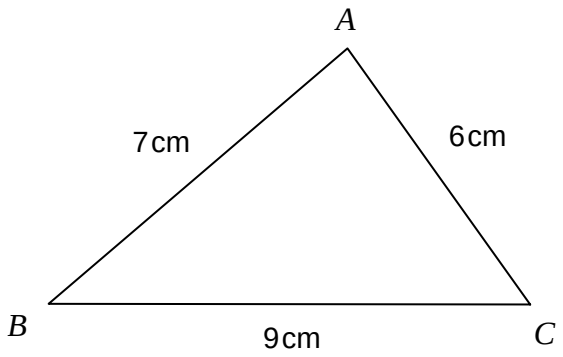
Remember to complete the key.

Key | represents ..... years

1	
2	
3	

(4 marks)

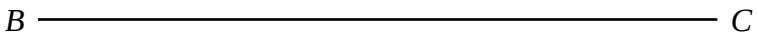
***13** This is a sketch of a triangle.



Not drawn accurately

Use a ruler and compasses to draw triangle ABC accurately.

The side BC has been drawn for you.



(3 marks)

Turn over for the next question

10

14 An approximate formula for converting from degrees Fahrenheit (°F) to degrees Celsius (°C) is

$$C = \frac{F - 30}{2}$$

Work out the approximate value of C when $F = 68$

.....

.....

Answer ..... °C *(2 marks)*

15 Solve $5x + 3 = 13$

.....

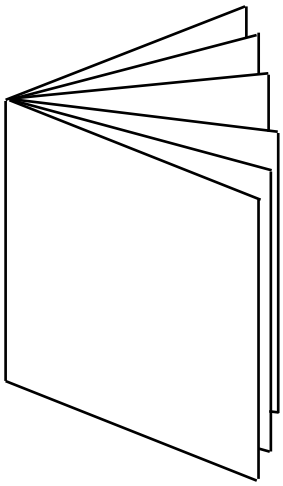
.....

$x =$..... *(2 marks)*

Do not write outside the box

*16 A club produces a newsletter.

Three sheets of paper are folded in half to make the newsletter as shown.



16 (a) How many pages does the newsletter have?

Answer ……..... *(1 mark)*

16 (b) The club charges £5 for each **quarter** page of adverts.
Adverts fill 3 pages.

Each newsletter costs 40p to print.
200 copies of the newsletter are printed and given away free.

Does the club lose money producing the newsletter?

You **must** show your working.

……

……

……

……

……

……

……

……

……

(5 marks)

10

17 This table shows the driving distances, in kilometres, between five towns.

For example, it is 250 kilometres from Cardiff to London.

Aberdeen	Cardiff	Edinburgh	London	Manchester
750				
180	580			
760	250	640		
480	280	330	310	

17 (a) Trevor does this journey.

Edinburgh ⟶ Manchester ⟶ Cardiff ⟶ London ⟶ Edinburgh

How far does he drive?

Answer ..... km *(2 marks)*

17 (b) John drives from Aberdeen to Edinburgh. His average speed is 60 kilometres per hour.

How long does his journey take?

.....

.....

Answer ..... hours *(2 marks)*

Do not write outside the box

18 Andy sees two offers on potatoes.

Which is the better buy?

You **must** show your working.

.....

.....

.....

.....

Answer ..... *(4 marks)*

Turn over for the next question

8

Do not write outside the box

19 A test is taken by 20 students.

Mark, *m*	**Frequency**	**Midpoint**	
$0 \leq m \leq 4$	0	2	
$5 \leq m \leq 9$	4	7	
$10 \leq m \leq 14$	10	12	
$15 \leq m \leq 19$	4	17	
$20 \leq m \leq 24$	2	22	
	20		

Work out an estimate of the mean mark.

……

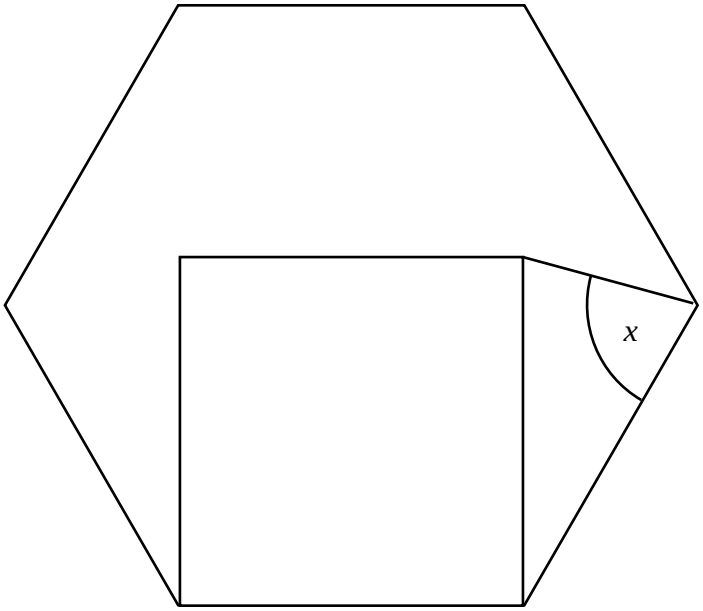
……

……

……

Answer ……. *(3 marks)*

20 A square is drawn on one side of a regular hexagon, as shown.



Not drawn accurately

Work out the size of angle x.

.....

.....

.....

.....

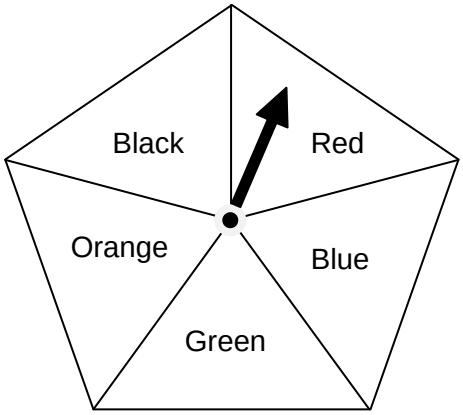
$x =$ ..... degrees *(4 marks)*

Turn over for the next question

7

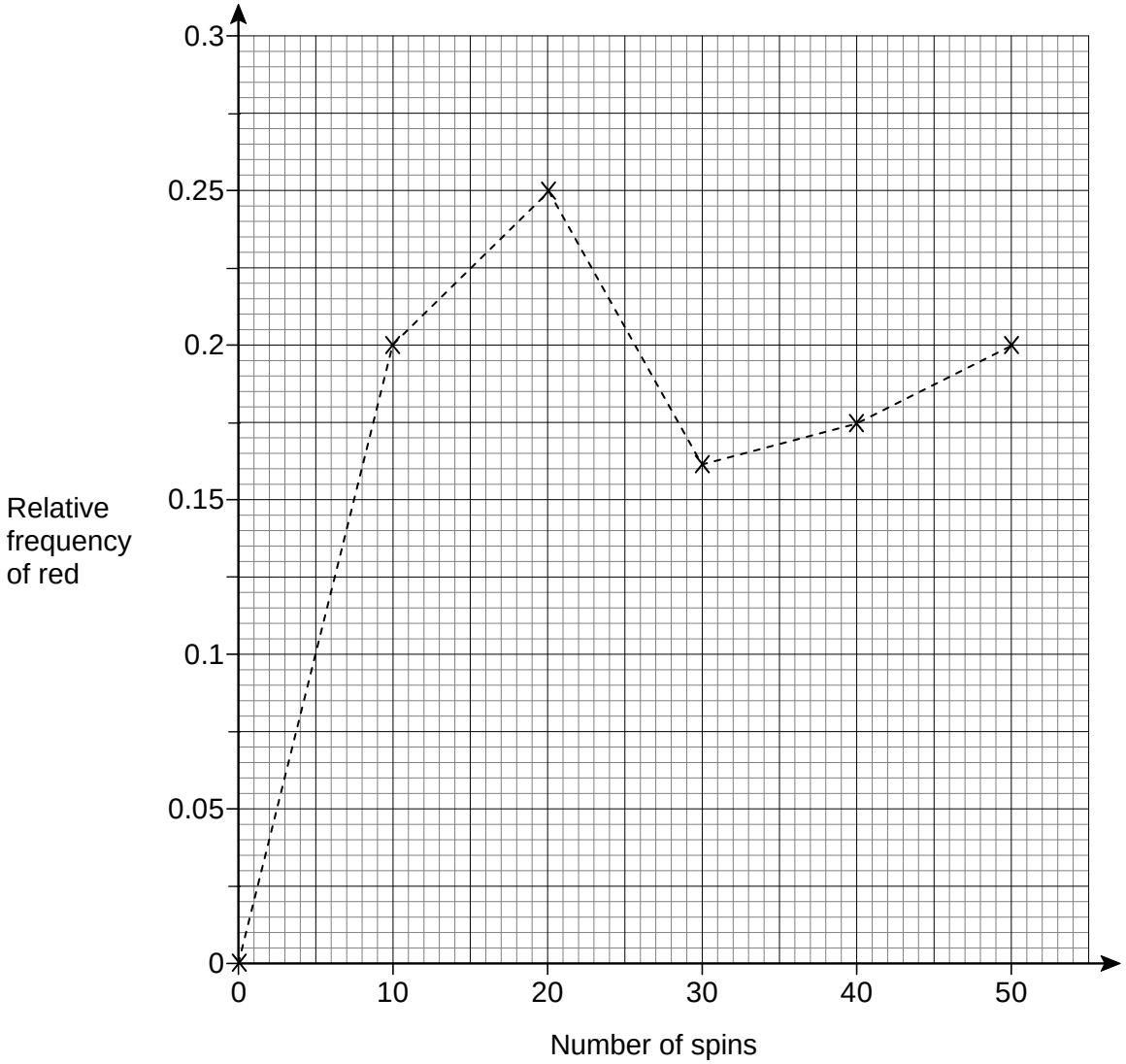
21 Here is a spinner with 5 equal sides.

The arrow is spun 50 times.



The number of times the arrow lands on red is recorded.

The relative frequency of red is plotted after every 10 spins on the grid.



Do not write outside the box

21 (a) Show that the arrow landed on red 5 times in the first 20 spins.

.....

.....

(*1 mark)*

21 (b) Is the spinner biased towards red?

Tick a box.

Yes ☐ No ☐

Give a reason for your answer.

.....

.....

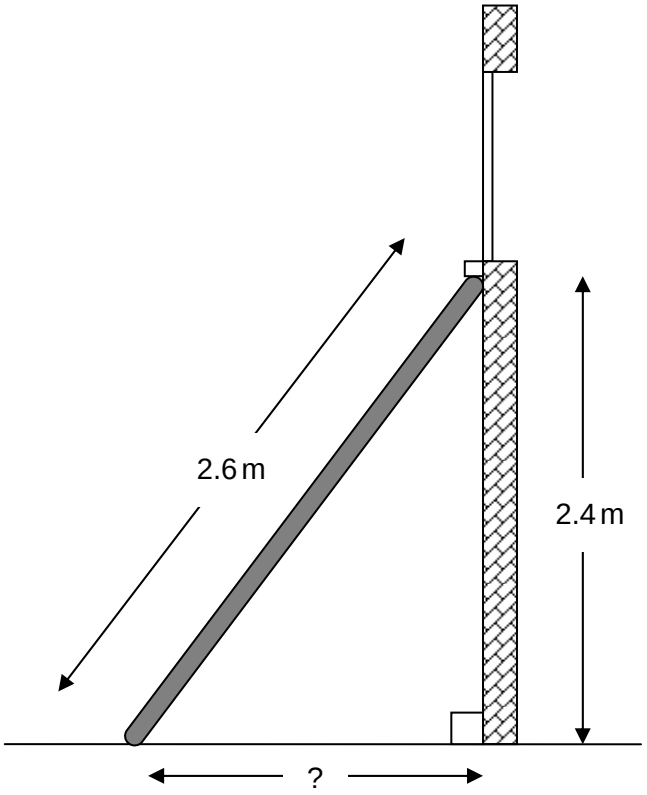
.....

(*2 marks)*

Turn over for the next question

3

22 A ladder is 2.6 m long.
It is placed so that it just reaches a window ledge 2.4 m above the ground.



How far from the base of the wall is the foot of the ladder?

You will need the following information.

$$2.4^2 = 5.76,\ 2.6^2 = 6.76$$

You **must** show your working.

.....

.....

.....

.....

.....

.....

Answer ……..... m *(3 marks)*

END OF QUESTIONS