Mathematics C (Graduated Assessment)   **1966/2341B (F)**
FOUNDATION TIER TERMINAL PAPER – SECTION B

Specimen Paper 2003

Additional materials:

Tracing paper
Geometrical instruments
Scientific calculator
Pie chart scale

TIME 1 hour

Candidate Name		Centre Number	Candidate Number

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers, in blue or black ink, in the spaces provided on the question paper.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- There is a space after most questions. Use it to do your working. In many questions marks will be given for correct working even if the answer is incorrect.
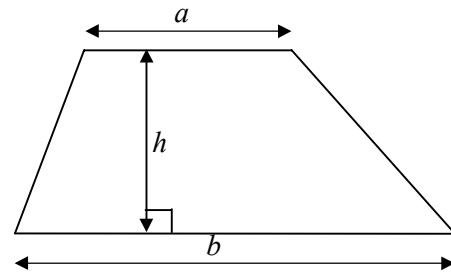
INFORMATION FOR CANDIDATES

- You are expected to use a calculator in Section B of this paper.
- The number of marks is given in brackets [ ] at the end of each question or part question.
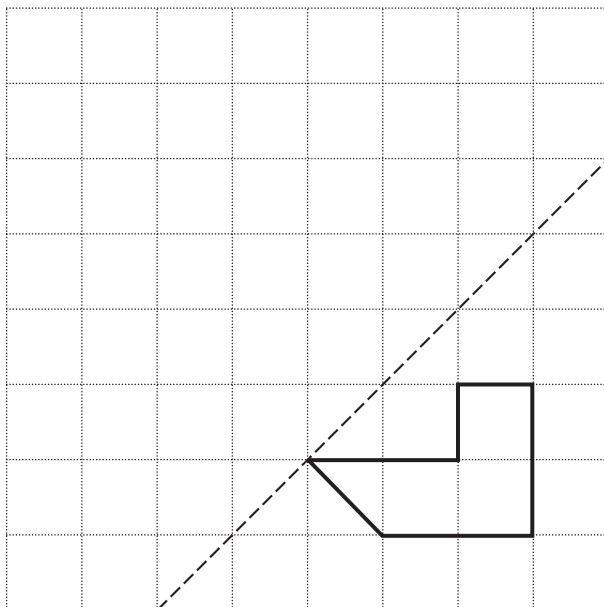- The total mark available for this Section is 50.

For Examiners' Use	
Section B	

FORMULAE SHEET: FOUNDATION TIER

Area of trapezium = $\frac{1}{2}(a+b)h$
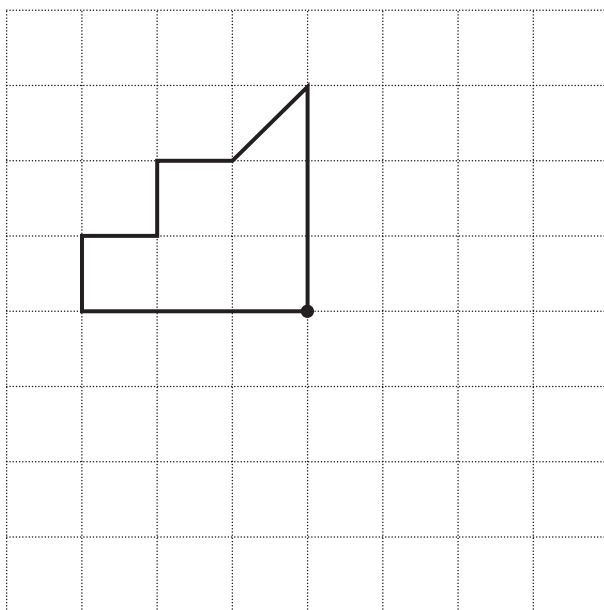
13 **(a)** Reflect this shape in the given line.

[2]

(b) Complete this pattern so it has a rotational symmetry of order 4.

[3]

5
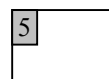
14 **(a)** Charles has this number pattern.

$$1, \qquad 5, \qquad 9, \qquad 13, \qquad \underline{\quad\quad}$$

Fill in the next number in his pattern.

Explain how you worked out your answer.

_____

_____ [1]

(b) Mary has this number pattern.

$$1, \qquad 2, \qquad 4, \qquad 8, \qquad \underline{\quad\quad}$$

Explain how to work out the next number in Mary's pattern.

_____

_____ [1]

2

15 Kareem drives a taxi.
He uses this formula to work out his charge in pounds.

> Divide the number of miles by 2
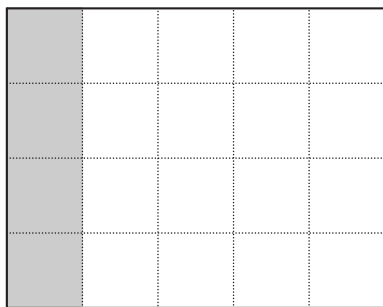> And then add 10

Work out Kareem's charge for a journey of 48 miles.
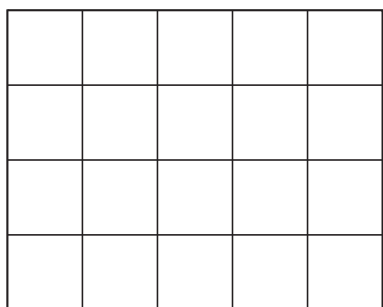
£ _____ [2]

2

16 **(a)** What fraction of this shape is shaded?
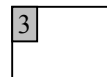
Give your answer in its lowest terms.

(a) _____ [2]

(b) Shade $\frac{3}{4}$ of this shape.

(b) _____ [1]

17

Raymond went to the supermarket and bought these items.

> 3 jars of jam at £1·19 a jar
>
> 2·5 kg of turkey at £4·36 a kg
> 1 litre of milk at 49p.

He paid with a £20 note.

How much change did he get?

£ _____ [4]

4

18

£42 700 collected
for famine relief

(a) Write £42 700 to the nearest thousand pounds.

(a) £ _____ [1]

(b) Local schools raised 32% of the money.
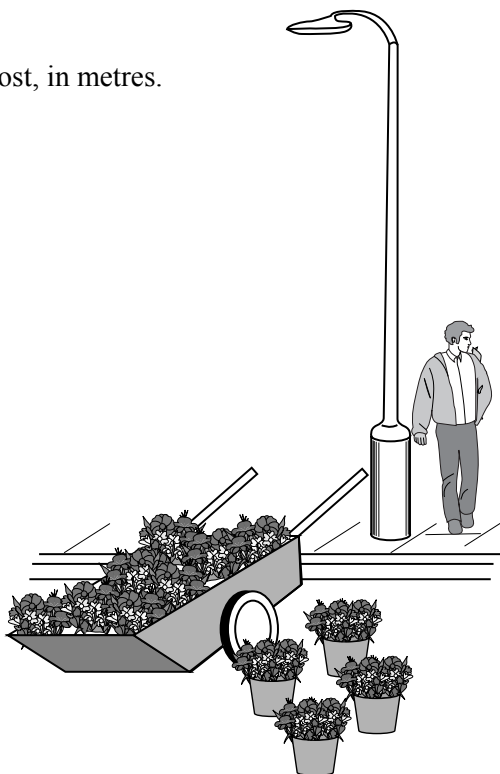
Work out 32% of £42 700.

(b) £ _____ [2]

3

19 Dave is selling flowers.

(a) Estimate the height of the lamp-post, in metres.

(a) _____ m   [2]

(b) What metric units would you use for

    (i) the height of a flower bucket,

(b)(i) _____   [1]

    (ii) the weight of one flower?

(ii) _____   [1]

(c) Dave has 3 litres of water in his watering can.
He has four flower buckets.
He pours 50 millilitres of water into each bucket.

How many millilitres of water are left in the watering can?

(c) _____ ml   [2]

6

20 Sue throws a fair six-sided dice with faces marked 1, 2, 3, 4, 5 and 6.

   (a) Mark on the scale below the probability that she throws a 6.

      0   1

                                                                                       [1]

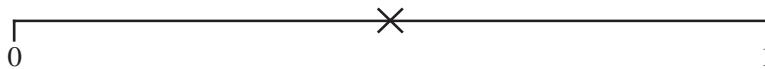   **(b)** Mark on the scale below the probability that she throws a 7.

      0   1

                                                                                        [1]

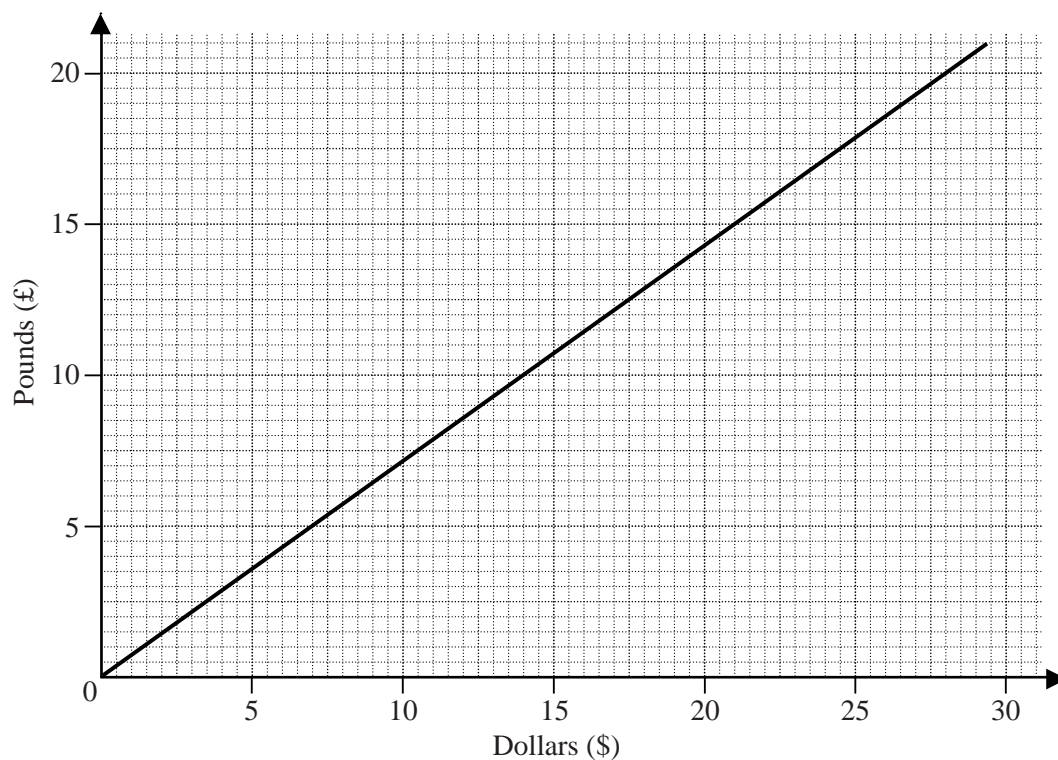   **(c)** The probability that she throws an odd number is marked on the scale below with a cross.

      0   ✕   1

      Explain why the cross is marked on the middle of the line.

      _____

      _____ [1]

                                                                        3

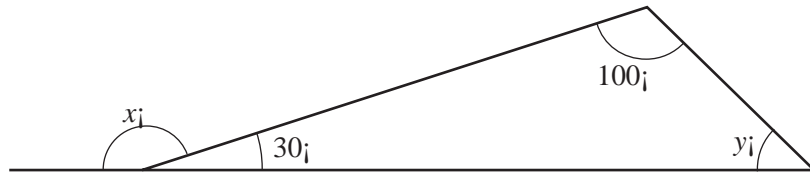**21** This conversion graph is for dollars ($) to pounds (£).

Use the graph to

(a) change £5 into dollars ($),

(a) $ _____ [1]

(b) change $17 into pounds (£).
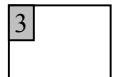
(b) £ _____ [1]

2

22

(a) Work out the size of angle x.

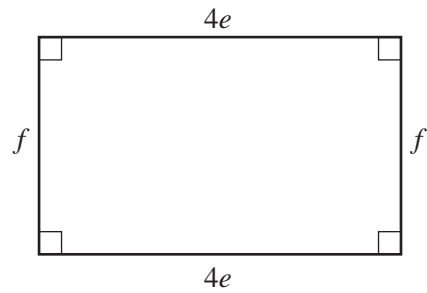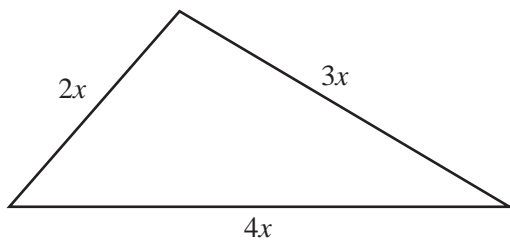**(a)** $x =$ _____ ° [1]

(b) Find the size of angle y.
Explain how you worked out your answer.

$y =$ _____ ° because _____

_____ [2]

3

23   Look at these shapes.

Write as simply as possible an expression for
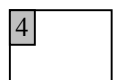
(a)   the perimeter of the triangle,

(a) _____ [1]

(b)   the perimeter of the rectangle,
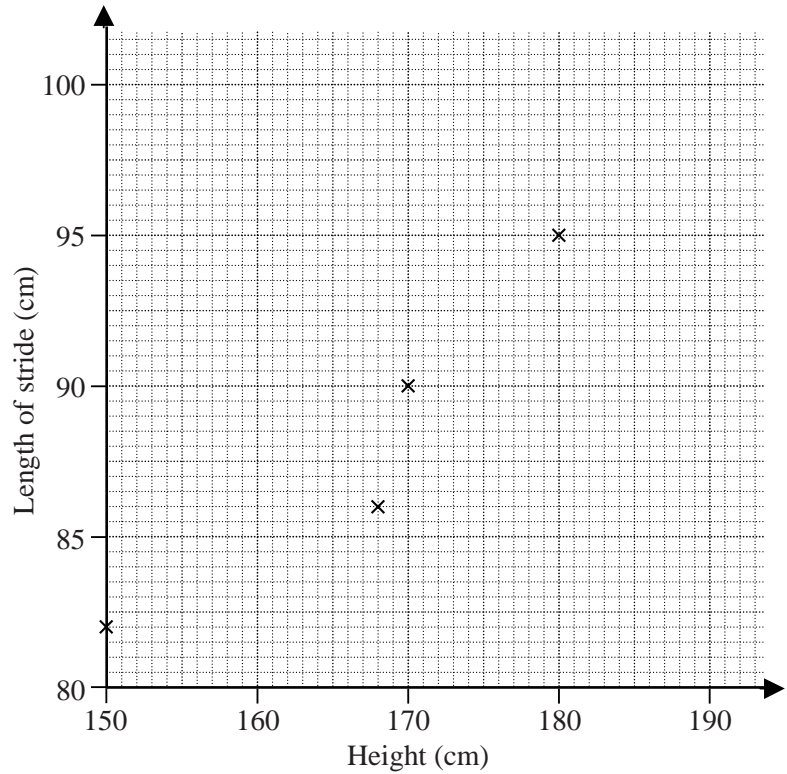
(b) _____ [2]

(c)   the area of the rectangle.

(c) _____ [1]

4

24 Jackie recorded the heights and the lengths of the strides of 10 boys in her form.
These are the results.

Height (cm)	170	180	168	150	164	172	167	176	182	190
Length of stride (cm)	90	95	86	82	87	89	93	92	94	96

(a) Complete this scatter diagram to show these results.
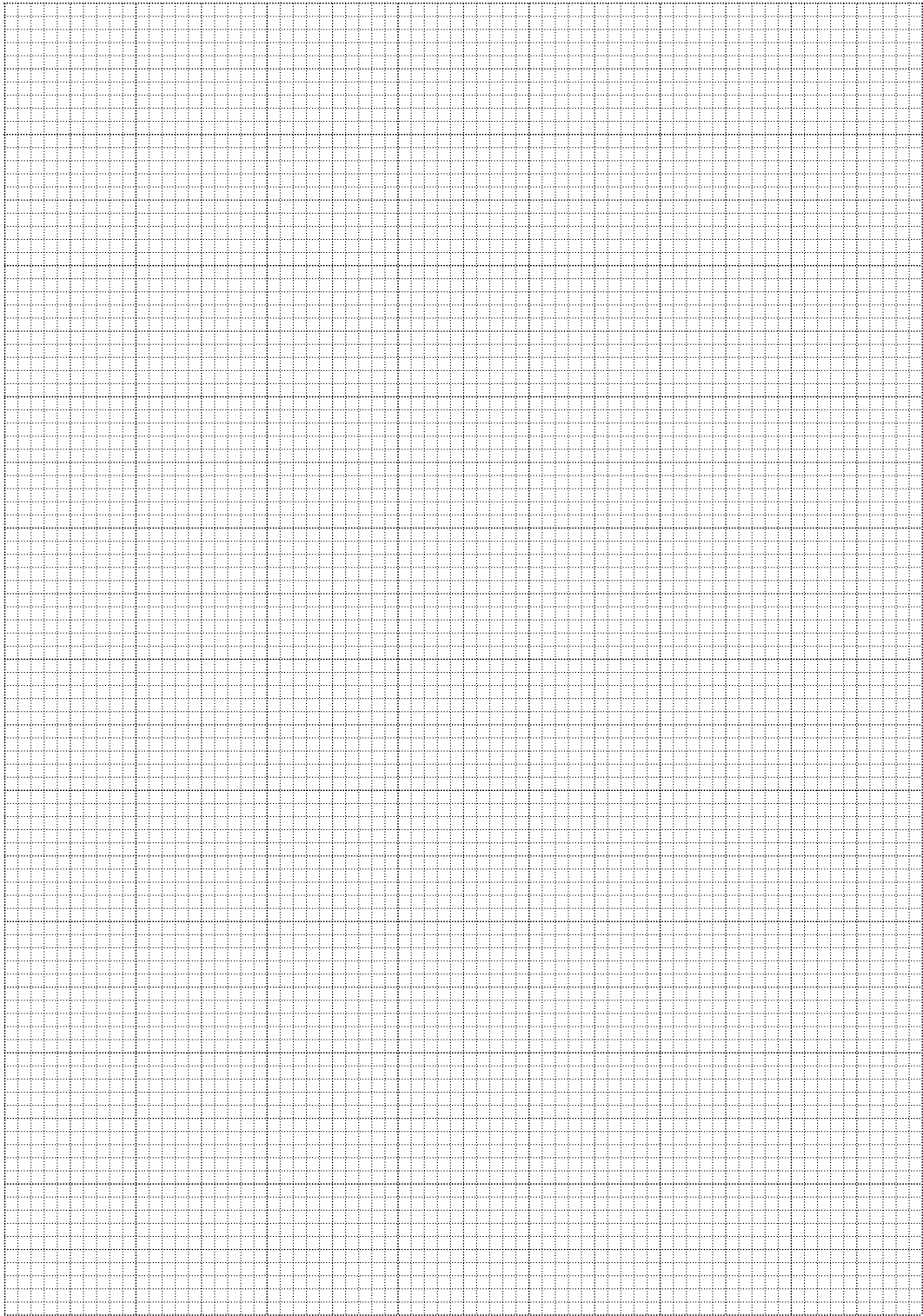The first four points have been plotted. [2]

(b) Comment on the relationship between the height and the length of stride of the ten boys.

_____

_____ [1]

3

25   Draw the graph of $y = 3x - 2$ on the grid below. Use values of x from 0 to 5.   [3]

3

26 Each year Brentwood School hold a sponsored swim.
The money raised is shared between two charities, A and B, in the ratio 5 : 1.

(a) In 1999 a total of £1800 was raised.

How much was given to charity A?

(a) £ _____ [2]

(b) In 2000 Charity A was given £1850.

How much was given to Charity B?

(b) £ _____ [2]

4

27 A circular picture frame has a piece of glass in front with radius 11 cm.

Work out the area of the glass.
Give your answer to a suitable degree of accuracy.

_____ cm^2 [3]

3