M1

OCR
RECOGNISING ACHIEVEMENT

GENERAL CERTIFICATE OF SECONDARY EDUCATION

MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M1 – SECTION B

B271B

Candidates answer on the question paper

OCR Supplied Materials:
None

Other Materials Required:
* Geometrical instruments
* Tracing paper (optional)
* Electronic calculator

Tuesday 20 January 2009
Morning

Duration: 30 minutes

Candidate Forename		Candidate Surname	

Centre Number					Candidate Number				

INSTRUCTIONS TO CANDIDATES

* Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
* Use black ink. Pencil may be used for graphs and diagrams only.
* Read each question carefully and make sure that you know what you have to do before starting your answer.
* Show your working. Marks may be given for a correct method even if the answer is incorrect.
* Answer **all** the questions.
* Do **not** write in the bar codes.
* Write your answer to each question in the space provided, however additional paper may be used if necessary.

INFORMATION FOR CANDIDATES

* The number of marks is given in brackets **[ ]** at the end of each question or part question.
* Section B starts with question 9.
* You are expected to use a calculator in Section B of this paper.
* The total number of marks for this Section is **25**.
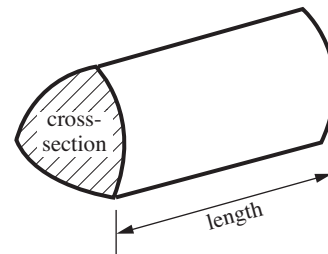* This document consists of **8** pages. Any blank pages are indicated.

FOR EXAMINER'S USE	
SECTION B	

Turn over

Formulae Sheet

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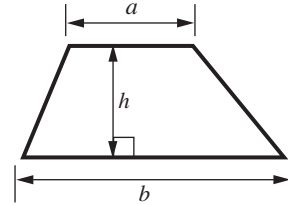
Volume of prism = (area of cross-section) × length

PLEASE DO NOT WRITE ON THIS PAGE

9 Work out the missing numbers.
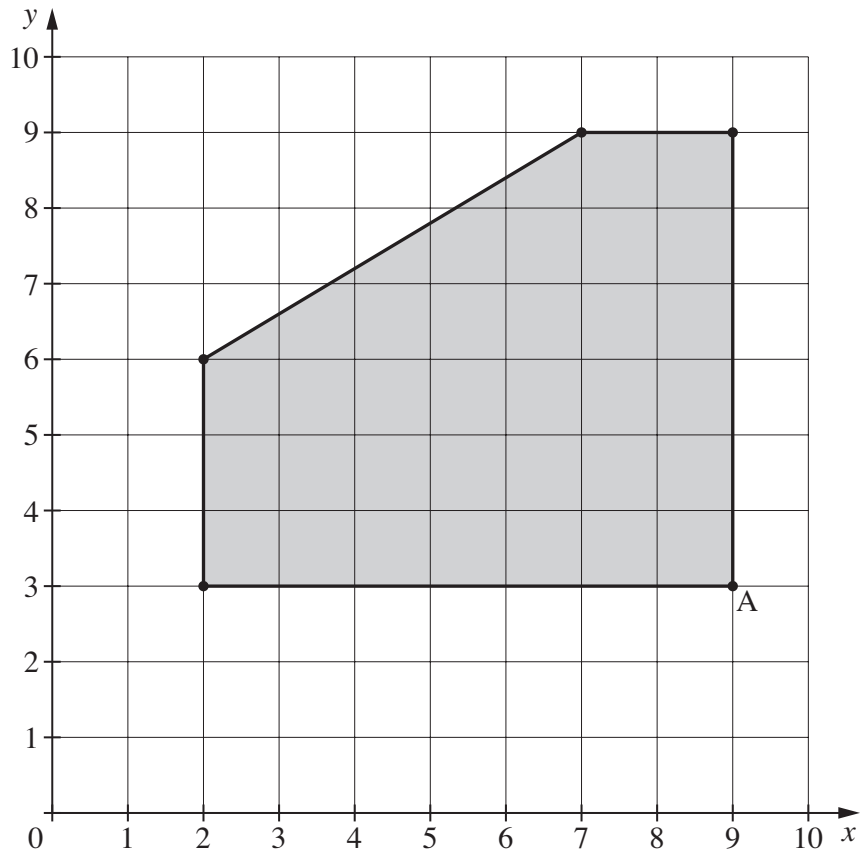
(a) $9 + \diamondsuit = 16$

(a) $\diamondsuit$ = ...[1]

(b) $50 - \heartsuit = 27$

(b) $\heartsuit$ = ...[1]

(c) $\bigstar \times 4 = 32$

(c) $\bigstar$ = ...[1]

10 This shape is drawn on a centimetre square grid.

(a) Write down the coordinates of point A.

(a) (.............. , ...) [1]

(b) Mark the point (7, 2). [1]

(c) Find the area of the shaded shape.

(c)............................... square centimetres [2]

Turn over

4

11   This bar chart shows the number of pets owned by the children in year 6.
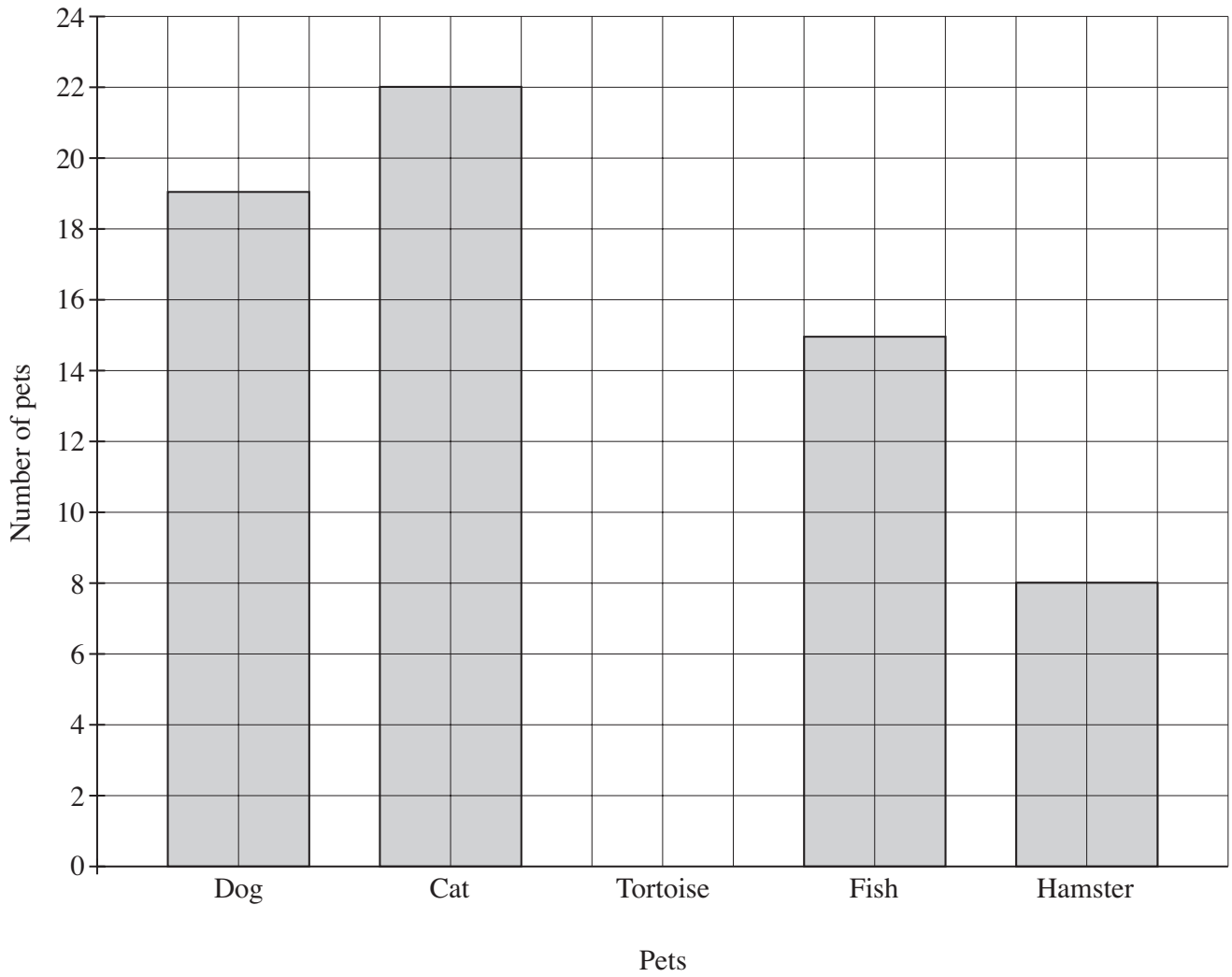
(a)   There are 12 tortoises.

Show this on the bar chart.   **[1]**
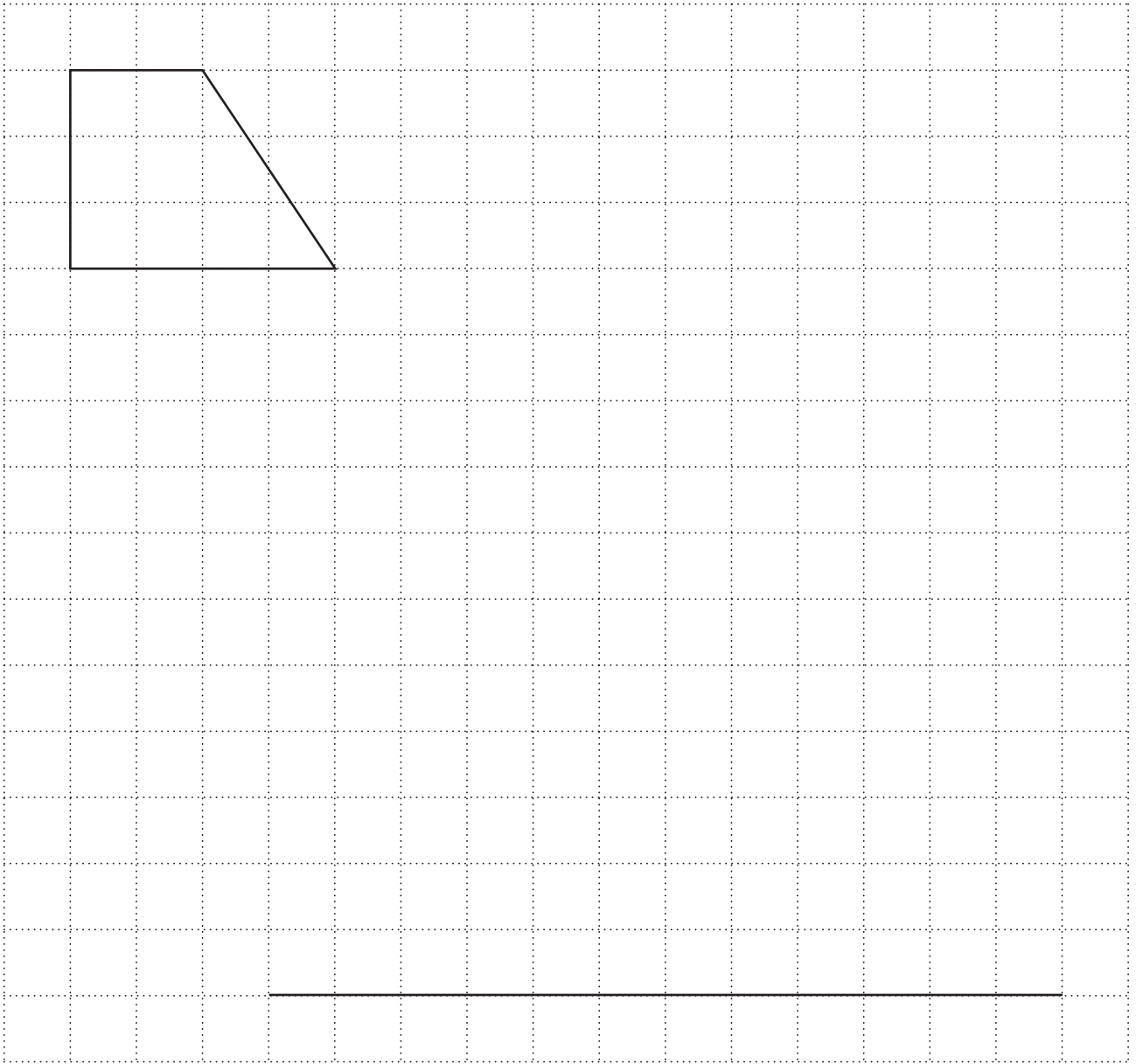
(b)   Complete these sentences.

(i)   There are .... cats.   **[1]**

(ii)   There are 15 ....   **[1]**

(c)   How many **more** dogs are there than hamsters?

(c)...................................**[2]**

12 Draw an enlargement of this shape.
Make each line three times as long.
One line has been drawn for you.

[2]

Turn over

13 **(a)** Katy is working out how much it cost to use her mobile phone in December.

<div style="border:1px solid">

<u>December</u>

176 texts at 11 pence each
36 calls at 15 pence each

</div>

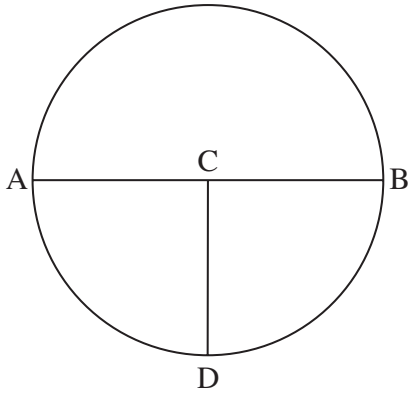Calculate the total cost for December.
Show how you work out your answer.

(a) £.................................. **[4]**

(b) Katy buys a new phone for £81.
Her mum pays $\frac{1}{4}$ of the cost.

Work out $\frac{1}{4}$ of £81.

(b) £ .... **[1]**

14

AB is a diameter of a circle, centre C.

(a) Measure the line AB.

(a)............................. cm **[1]**

(b) What is the mathematical name given to the line CD?

(b) .... **[1]**

15 Nails are packed into boxes of 50.

How many boxes are needed to pack 14 200 nails?

.... **[2]**

TURN OVER FOR QUESTION 16

16 Ravinder has to complete homework for Art (A), Maths (M) and History (H).

He could do Art first, Maths second and History third.
This order has been put in the table.

Complete the table to show all the possible orders.

You may not need to use all the rows.

First	Second	Third
A	M	H

[2]