M5

OCR RECOGNISING ACHIEVEMENT

Monday 16 January 2012 – Morning

GCSE MATHEMATICS C (GRADUATED ASSESSMENT)

B275A   MODULE M5 – SECTION A

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
• Geometrical instruments
• Tracing paper (optional)
• Pie chart scale (optional)

Duration: 30 minutes

Candidate forename		Candidate surname	

Centre number					Candidate number				

INSTRUCTIONS TO CANDIDATES

• Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
• Use black ink. HB pencil may be used for graphs and diagrams only.
• Answer **all** the questions.
• Read each question carefully. Make sure 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.
• Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
• Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

• The number of marks is given in brackets **[ ]** at the end of each question or part question.
• The total number of marks for this Section is **25**.
• This document consists of **8** pages. Any blank pages are indicated.
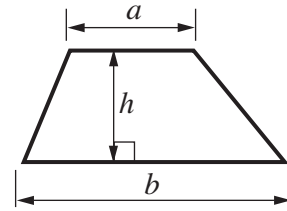
WARNING

No calculator can be used for Section A of this paper

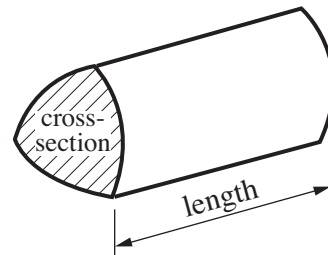This paper has been pre modified for carrier language

OCR is an exempt Charity

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

1 Here is a sketch of a triangle.

C

7 cm

Not to scale

52°

A   8·5 cm   B
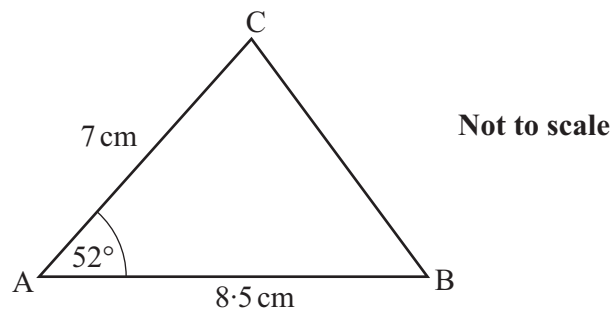
(a) Make an accurate drawing of this triangle below.
The line AB has been drawn for you. **[2]**

A ———————————————————————— B

(b) Measure the length of the line BC on your drawing.

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

Turn over

2 Solve.

   (a) $18 = 3x$

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

   (b) $x + 2 = 17$

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

   (c) $2x - 1 = 17$

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

3 The Earth takes 365·25637 days, correct to 5 decimal places,
to complete one orbit of the Sun.

Write 365·25637 correct to

(a) the nearest ten,

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

(b) two decimal places,

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

(c) one significant figure.

(c) .... **[1]**

4 (a) Write the bearing 270° as a compass direction.

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

(b) Samit is facing South-East.
He turns 90° clockwise.

In which direction is he now facing?
Write your answer as a bearing.

(b) ....° **[2]**

Turn over

5 **(a)** Write $\frac{48}{80}$ as a fraction in its simplest form.

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

(b) Work out.

$$\frac{3}{5} \times \frac{1}{4}$$

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

(c) Write as a power of 3.

$$3 \times 3 \times 3 \times 3$$

(c) .... **[1]**

(d) Work out the cube of 4.

(d) .... **[1]**

(e) Express 50 cm as a fraction of 2 m.

(e) .... **[1]**

6 Work out.

   (a) $4 + {}^-2$

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

   (b) ${}^-3 - {}^-2$

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

   (c) $5 \times {}^-2$

                                     (c) .... **[1]**

   (d) ${}^-12 \div 2$

                                     (d) .... **[1]**
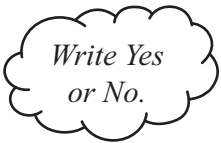
TURN OVER FOR QUESTION 7

7 Bob and Jesse take part in a long jump competition.
Here is a summary of their jumps, in metres.

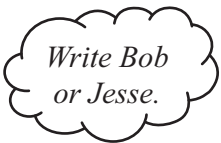|	Median	Range
Bob	8·15	0·69
Jesse	8·03	0·24

(a) Bob says he jumps further than Jesse on average.

Is Bob correct?
Give evidence for your answer.

Write Yes or No.

.... because ....

.... **[1]**

(b) Which of these athletes is the more consistent jumper?
Give evidence for your answer.

Write Bob or Jesse.

.... because ....

.... **[1]**

(c) The winner of the competition jumped 8·29 m.

Explain how you can tell that Jesse was **not** the winner.

....

....

.... **[1]**