OCR
RECOGNISING ACHIEVEMENT

B277A

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M7 – SECTION A

M7

TUESDAY 24 JUNE 2008

Morning
Time: 30 minutes

Candidates answer on the question paper
Additional materials (enclosed): None

Additional materials (required):
Geometrical instruments
Tracing paper (optional)

CUP/T60666

Candidate Forename		Candidate Surname	
Centre Number		Candidate Number	

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or 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.

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**.

WARNING

You are not allowed to use a calculator in Section A of this paper.

FOR EXAMINER'S USE	
SECTION A	
SECTION B	
TOTAL	

This document consists of **7** printed pages and **1** blank page.

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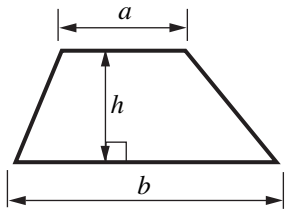
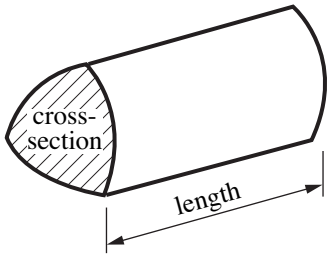
Formulae Sheet

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



Volume of prism = (area of cross-section) × length



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1 **(a)** **Estimate** the answer to this calculation.
Show clearly the values you use.

$$\frac{\sqrt{65} \times 39{\cdot}6}{15{\cdot}8}$$

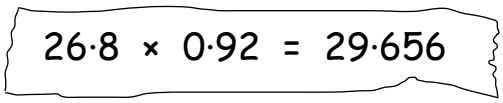
(a) ..... [2]

(b) Work out.

$$\sqrt{144} + 4^3$$

(b) ..... [2]

(c) This is part of Gareth's homework.



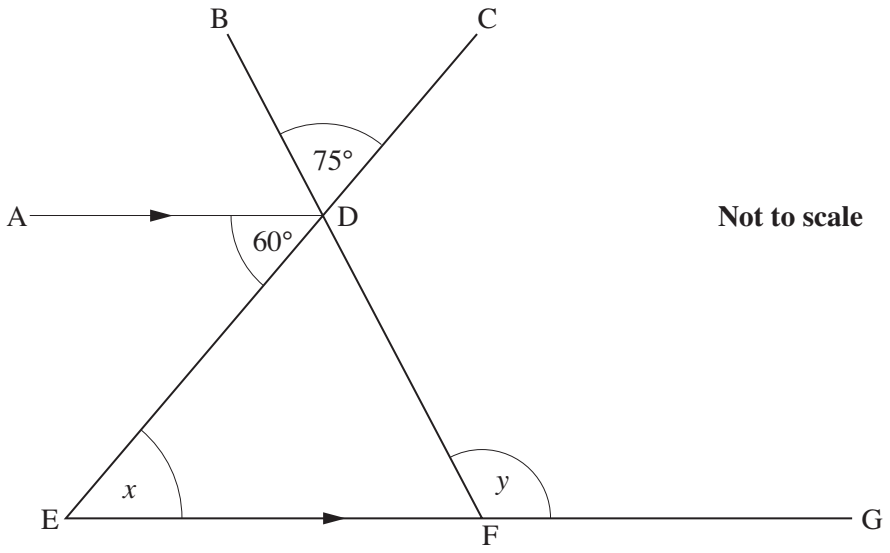
Explain how you can tell his answer is wrong.
You do not need to work out the correct answer.

.....

.....

..... [1]

2



EFG is a straight line parallel to AD.
CDE and BDF are straight lines.
Angle ADE = 60º and angle BDC = 75º.

(a) Find angle *x*.
Give a reason for your answer.

x = ...° because .....

..... [2]

(b) Find angle *y*.
Give reasons for your answer.

y = ...° because .....

..... [3]

3 The three angles of a triangle, a, b and c, are in the ratio 3 : 5 : 7.

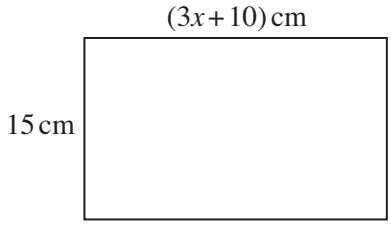
Calculate the size of each angle.

a = ... °

b = ... °

c = ...° [3]

4 The perimeter of this rectangle is 86 cm.



Form an equation in x and solve it to find x.

..... [3]

5 **(a)** Write 63 as a product of its prime factors.

(a) ..... [2]

(b) Find the lowest common multiple (LCM) of 42 and 63.

(b) ..... [2]

6 **(a)** Solve.

$$3(4x - 5) = 15$$

(a) ..... [3]

(b) Expand.

$$(x + 3)(x - 4)$$

(b) ..... [2]

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