

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M5 – SECTION A

B275A

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:

- Geometrical instruments
- Tracing paper (optional)
- Pie chart scale (optional)

Monday 8 March 2010
Morning

Duration: 30 minutes



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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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.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

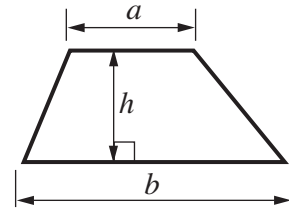
WARNING



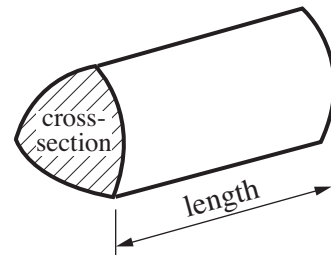
No calculator can be used for Section A of this paper

Formulae Sheet

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



Volume of prism = (area of cross-section) \times length



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1 Work out.

(a) 10^3

(a)..... [1]

(b) $5 +^{-}7$

(b)..... [1]

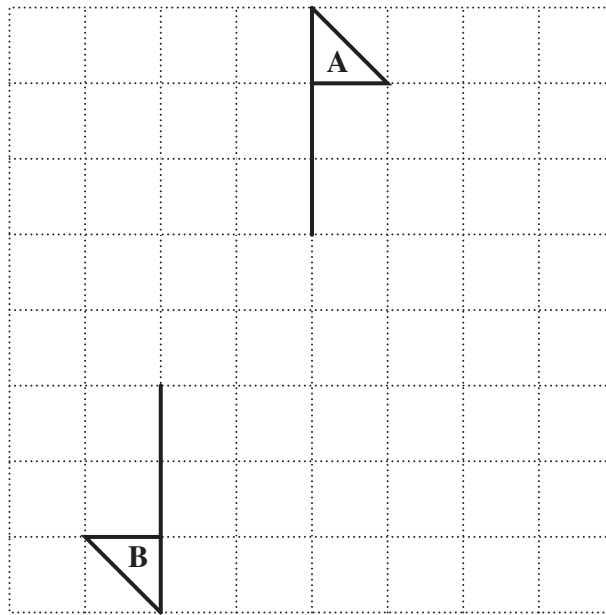
(c) $4 \times^{-}5$

(c)..... [1]

(d) $\frac{5}{8} \times \frac{1}{3}$

(d)..... [2]

2 In the diagram, shape **A** has been rotated onto shape **B**.



(a) Write down the angle of rotation.

(a).....° [1]

(b) Mark **X** at the centre of rotation.

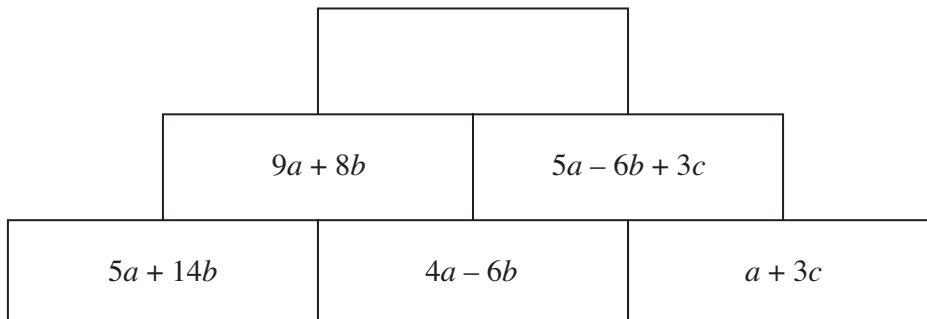
[1]

3 (a) Simplify.

$$5p + 4p - 2p$$

(a)..... [1]

(b) Each block of this pyramid is filled by adding the expressions in the two blocks below it.



Complete the pyramid.

[3]

4 (a) Round 592 to the nearest hundred.

(a)..... [1]

(b) Round 587.679 to 2 decimal places.

(b) [1]

(c) Round 54 769 to one significant figure.

(c)..... [1]

(d) (i) Mr Davie wants to buy 28 maths books for his class.
The books cost £17.99 each.

Write down a calculation that Mr Davie could do in his head to estimate the total cost of the books.

..... × = £ [2]

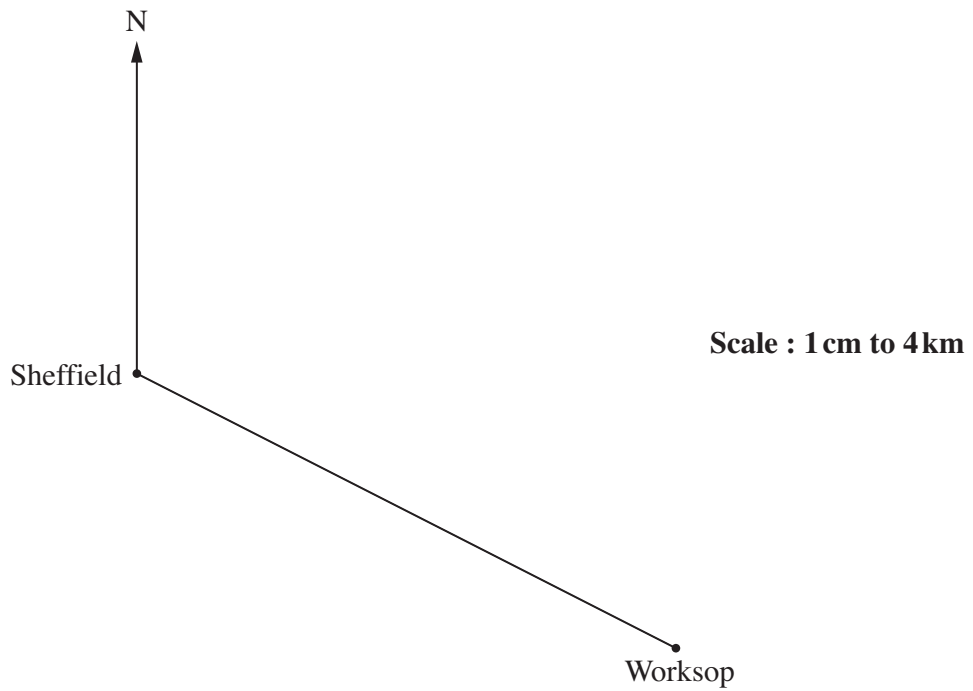
(ii) Is your answer bigger or smaller than the exact cost?

Explain how you decide.

..... because

..... [1]

5 This scale drawing shows the positions of two places, Sheffield and Worksop.



(a) (i) Measure the bearing of Worksop from Sheffield.

(a)(i) ° [1]

(ii) Work out the **real** distance between Sheffield and Worksop.

(ii) km [2]

(b) Doncaster is 26km from Sheffield on a bearing of 057° .

On the scale drawing above, mark and label D, the position of Doncaster. [2]

6 Lunch bags at Town School contain one sandwich and one piece of fruit from these lists.

Sandwich

- Meat (M)
- Cheese (C)
- Egg (E)

Fruit

- Apple (A)
- Orange (O)
- Banana (B)
- Pear (P)

(a) Complete the table to show all the different combinations there are.

Sandwich	Fruit
M	A

You may not need to use all the lines.

[2]

(b) One lunch bag of each combination is placed on a table. Mrs Murphy takes one of these lunch bags at random.

What is the probability that her lunch bag contains a Cheese sandwich and an Orange?

(b) [1]

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