

**GENERAL CERTIFICATE OF SECONDARY EDUCATION**  
**MATHEMATICS C (GRADUATED ASSESSMENT)**  
MODULE M3 – SECTION A

## B273A

Candidates answer on the Question Paper

**OCR Supplied Materials:**

None

**Other Materials Required:**

- Geometrical instruments
- Tracing paper (optional)

**Thursday 21 January 2010**  
**Afternoon**

**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.

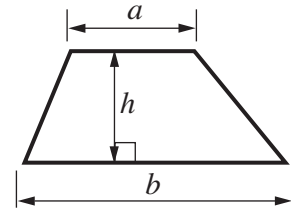
**WARNING**



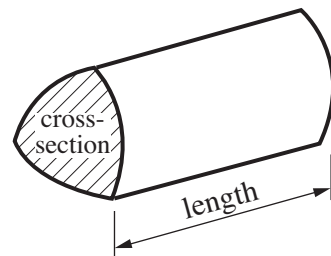
No calculator can be used for Section A of this paper

## Formulae Sheet

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



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



**PLEASE DO NOT WRITE ON THIS PAGE**

1 Calculate.

(a)  $£1.05 + £5.95$

(a) £ ..... [1]

(b) Half of £20

(b) £ ..... [1]

(c)  $5^2$

(c) ..... [1]

(d) 20% of £50

(d) £ ..... [1]

(e)  $2.75 \times 10$

(e) ..... [1]

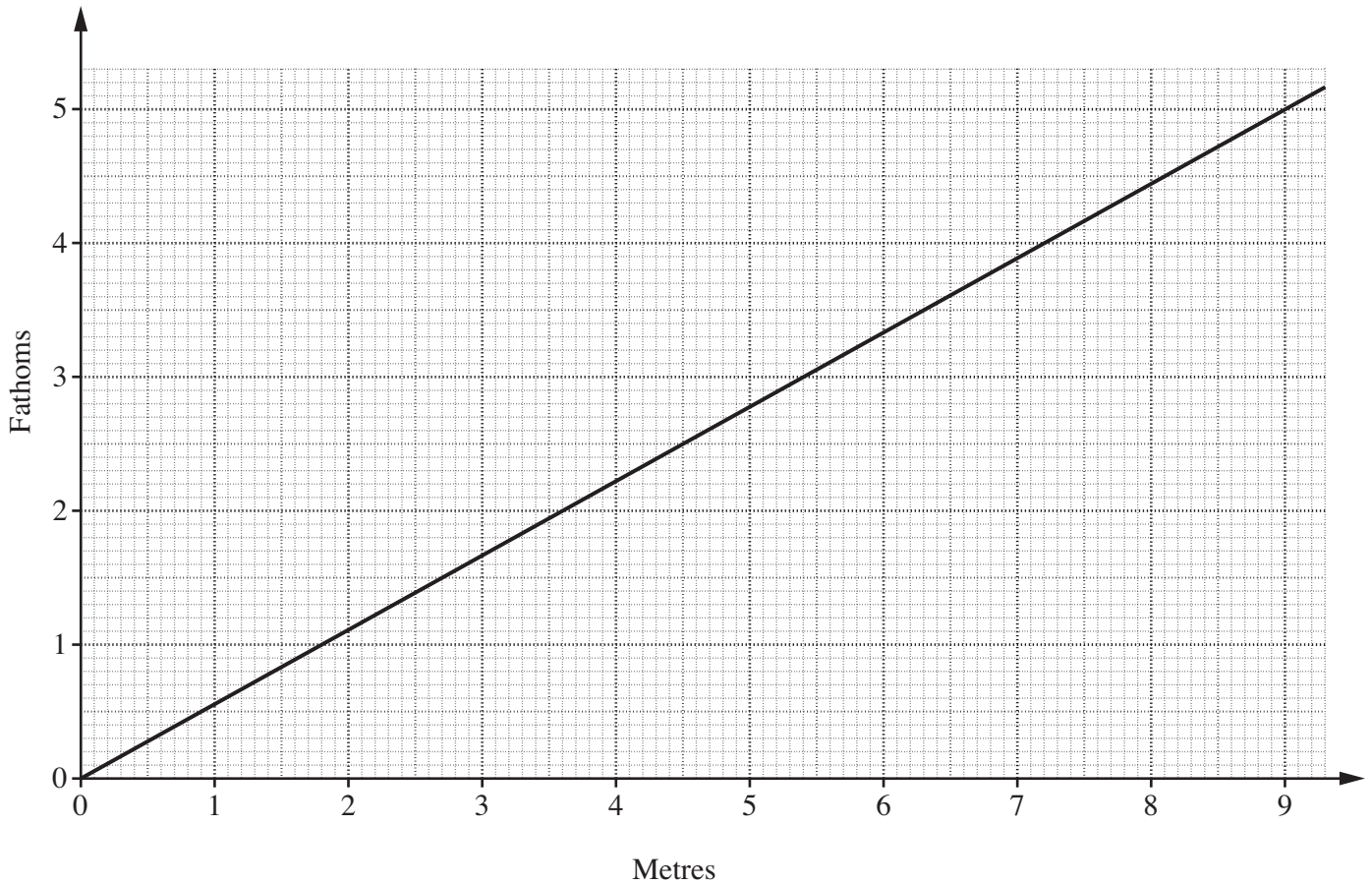
(f)  $4.9 \div 10$

(f) ..... [1]

(g)  $(4 + 2) \div (4 - 2)$

(g) ..... [2]

- 2 (a) About a thousand years ago the Anglo-Saxons used fathoms to measure length. This graph converts between fathoms and metres.



- (i) How many fathoms are there in 9 metres?

(a)(i) ..... fathoms [1]

- (ii) Harald was a Viking king.  
He tried to invade England in 1066.  
He was buried in one fathom of English earth.

What is 1 fathom in metres?

(ii) ..... m [1]

- (iii) How many metres are there in 10 fathoms?  
Explain how you worked out your answer.

..... metres because .....

..... [2]

(b) Anglo-Saxon pennies weigh 1.5 g each.

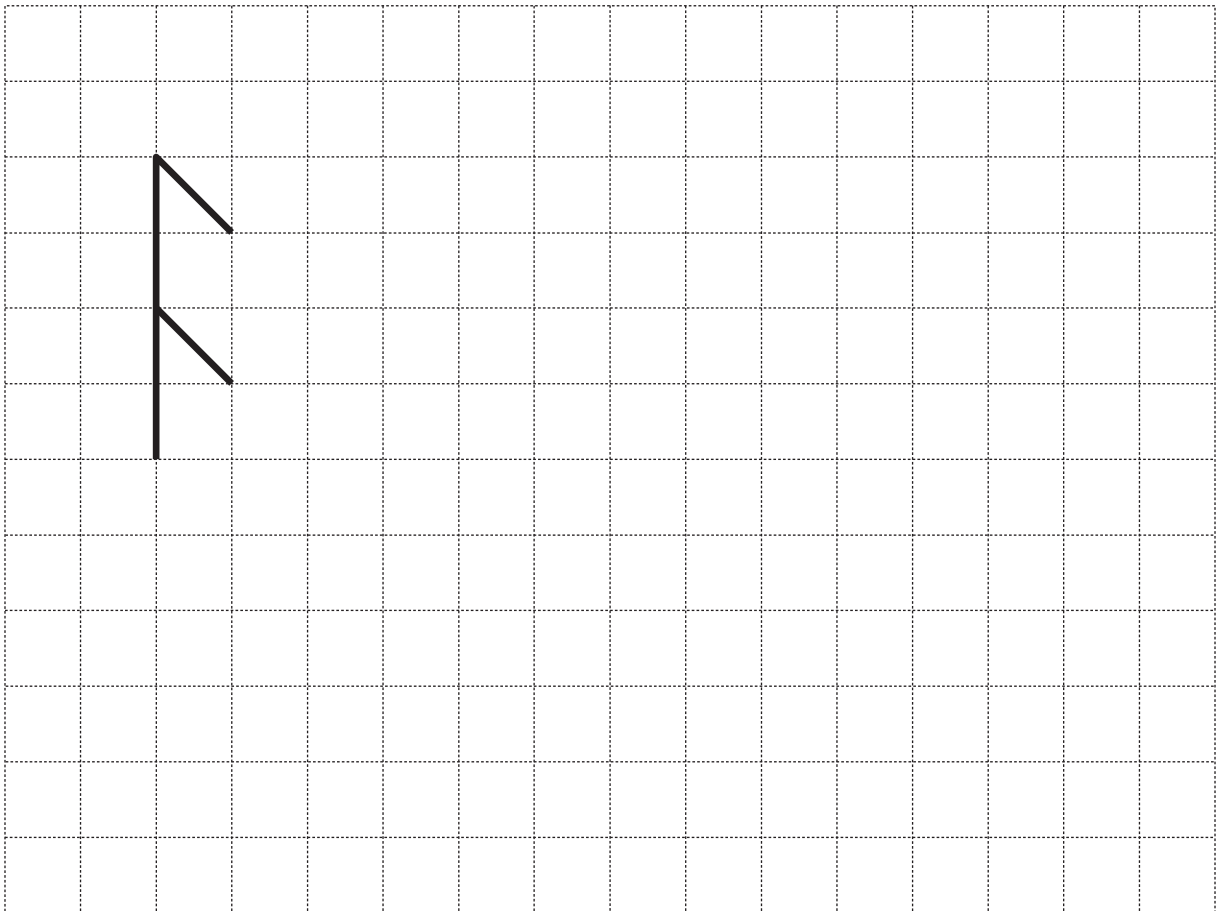
What do 4 Anglo-Saxon pennies weigh altogether?



(b) ..... g [2]

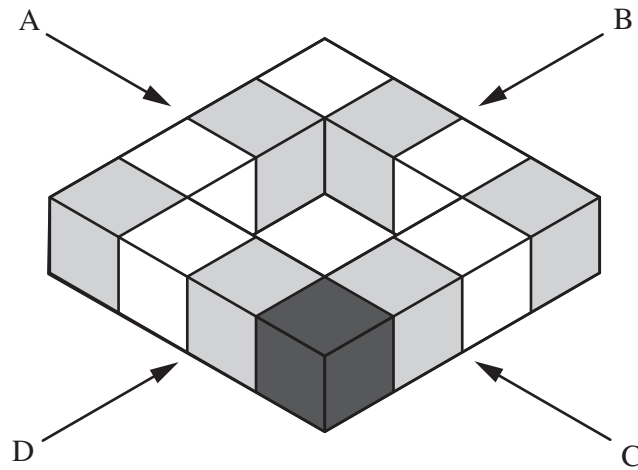
(c) On this grid is the Viking symbol for an ash tree.

Draw an enlargement of the symbol, scale factor 2.



[3]

3 Here is a view of a model made from 12 cubes.



Complete these statements with the correct letters.



This is the view looking from .....



This is the view looking from .....



This is the view looking from .....



This is the view looking from .....

[3]

4 There are two ways of buying tickets for a theme park:

- on the day at the theme park
- on the internet

There are tickets for a whole family or separate tickets for adults and children.

Adult on the day	Adult on the internet	Child on the day	Child on the internet	Family* on the day	Family* on the internet
£29	£22	£19	£15	£74	£59

**\*Two adults and two children**

(a) Work out the **most** that 2 adults and 2 children could pay to visit the theme park.

(a) £..... [3]

(b) A family of 2 adults and 2 children want to visit the theme park.

It says on the internet ...

**Families can save over £35!!  
BUY ONLINE**

Is this true?  
Explain your answer.

*Write Yes  
or No.*

..... because .....

..... [2]

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