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M2

GENERAL CERTIFICATE OF SECONDARY EDUCATION

MATHEMATICS C (GRADUATED ASSESSMENT) B272A

MODULE M2 – SECTION A

11LMP03001

Candidates answer on the question paper.

OCR supplied materials:
None

Other materials required:
- Geometrical instruments
- Tracing paper (optional)

Tuesday 1 March 2011
Morning

Duration: 30 minutes

B272A

Candidate forename		Candidate surname	

Centre number						Candidate number				

MODIFIED LANGUAGE

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. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- 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).
- 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.

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

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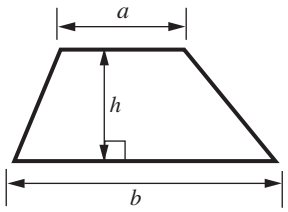
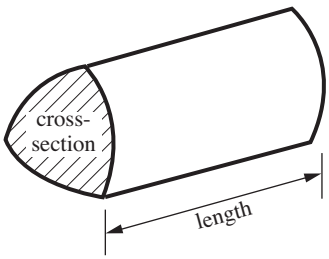
Formulae Sheet

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



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



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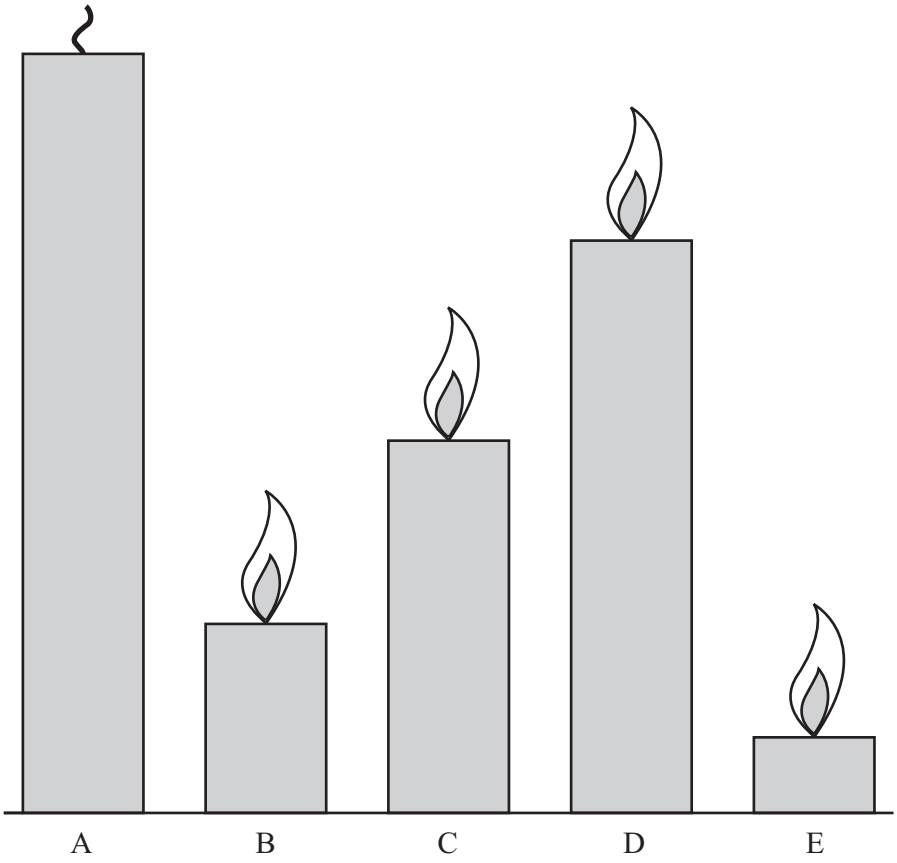
1 Here are 5 candles which all started with the same height.
Candle A has not been lit.



Which candle has

0·5 left, ...

75% left, ...

0·25 left, ...

0·1 left? ..... **[3]**

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2 **(a)** Use this information about 20p, 50p and £1 coins to answer the questions below.

Coin	Weight (g)	Thickness (mm)	Diameter (mm)
20p	5	1·7	21·4
50p	8	1·78	27·3
£1	9·5	3·15	22·5

(i) How much heavier is a £1 coin than a 50p coin?

(a)(i) ..... g **[2]**

(ii) How much thicker is a £1 coin than a 50p coin?

(ii) ..... mm **[2]**

(iii) How many **kilograms** will thirty 20p coins weigh?

(iii) ..... kg **[2]**

(iv) Which is worth more, 80 g of 20p coins or 80 g of 50p coins?
Show the calculations you used to get your answer.

..... **[4]**

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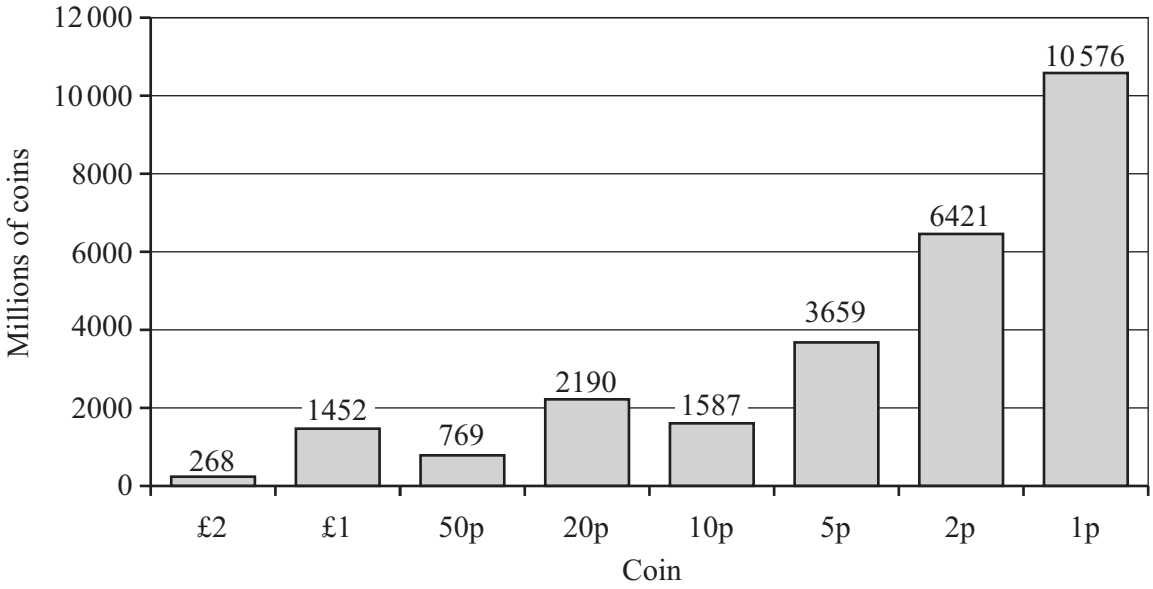
(b) This chart shows the number of different UK coins, in millions, in circulation at the end of 2007.

Coins in circulation



Use the chart to complete these sentences.

(i) There were ..... million £2 coins in circulation. **[1]**

(ii) These £2 coins were worth a total of £ ..... million. **[1]**

(iii) The ..... coin had the greatest number of coins in circulation. **[1]**

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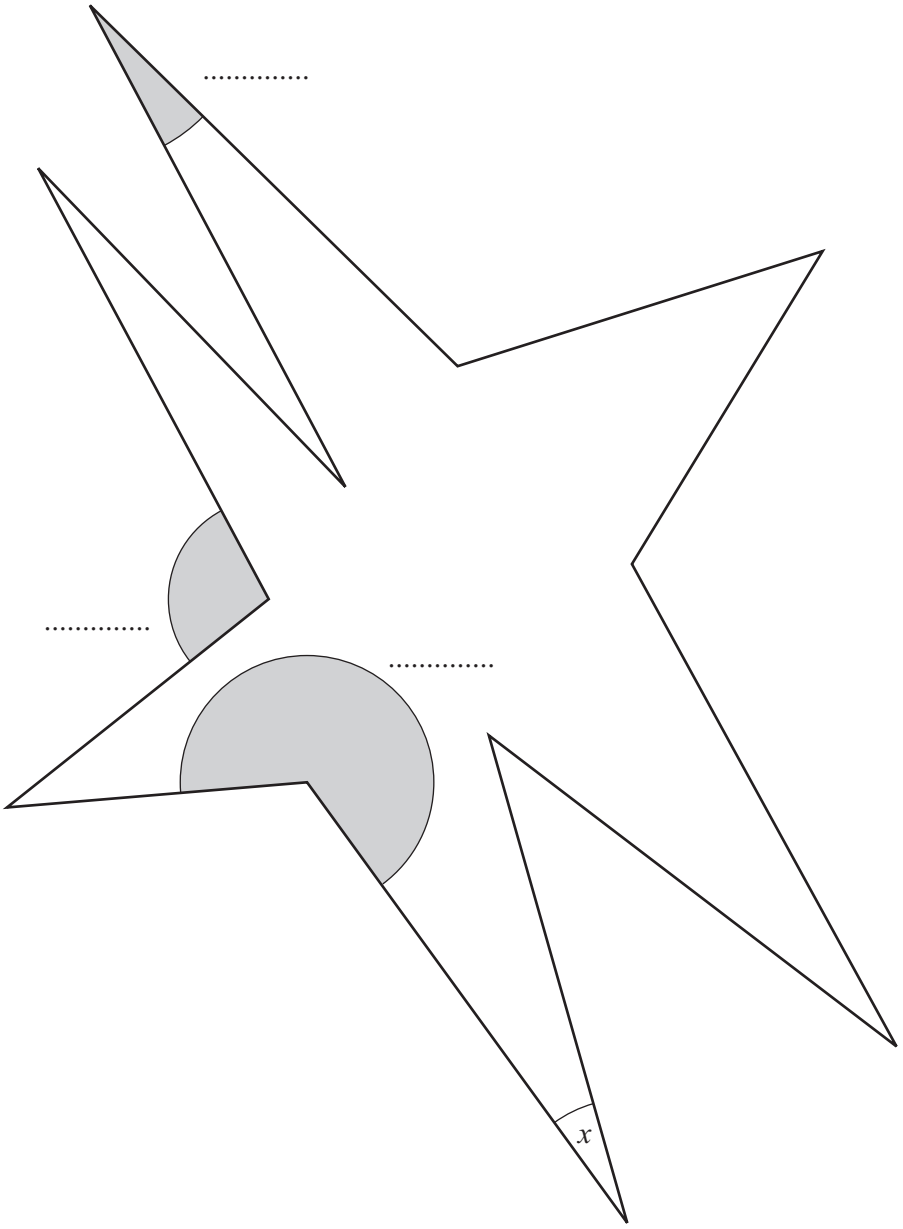
3 **(a)** **(i)** Here is a star shape.

Label the shaded angles as follows:

A for Acute
O for Obtuse
R for Reflex



[2]

(ii) Measure the size of the angle marked x.

(a)(ii) .....° **[1]**

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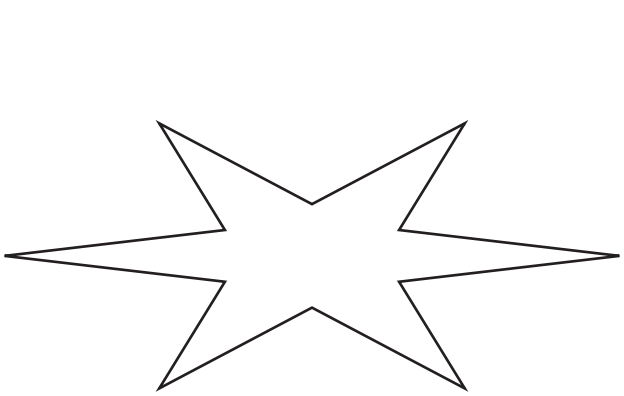
(b) Here are four star shapes.

Put a tick (✓) under any that **have** reflection symmetry.
Put a cross (✗) under any that **do not have** reflection symmetry.



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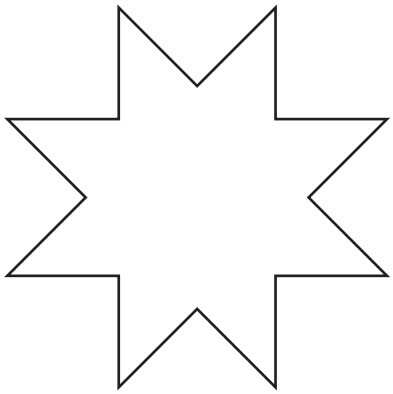

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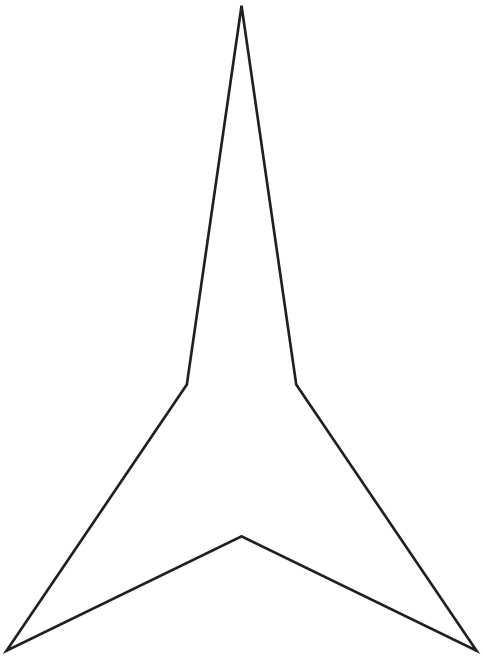

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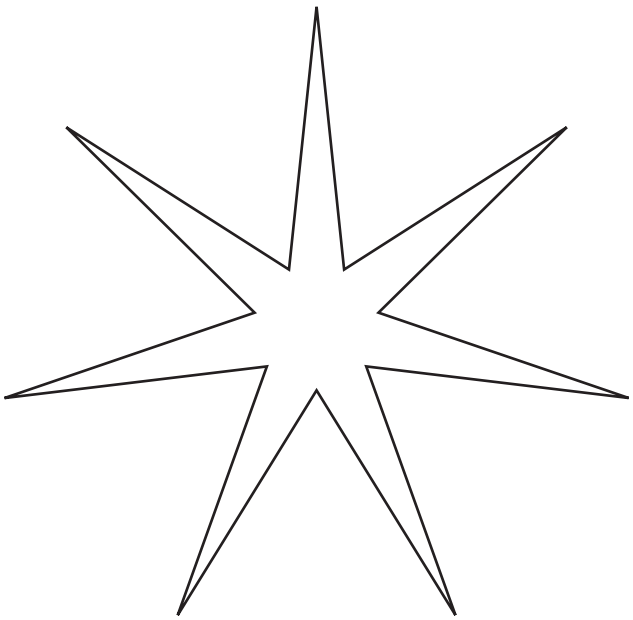

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[3]

TURN OVER FOR QUESTION 4

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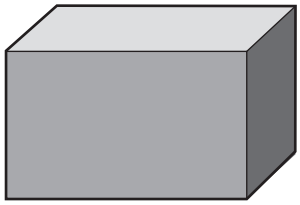
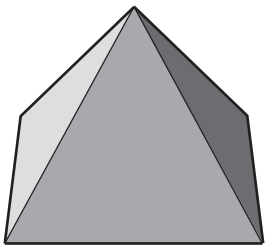
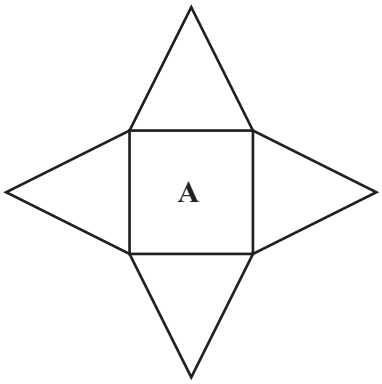
4 Here are three solids.

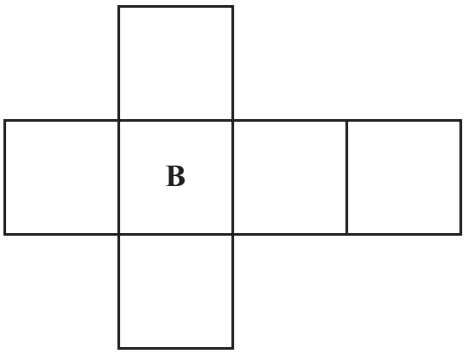


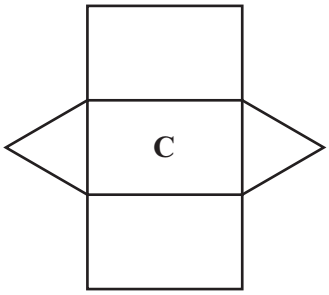


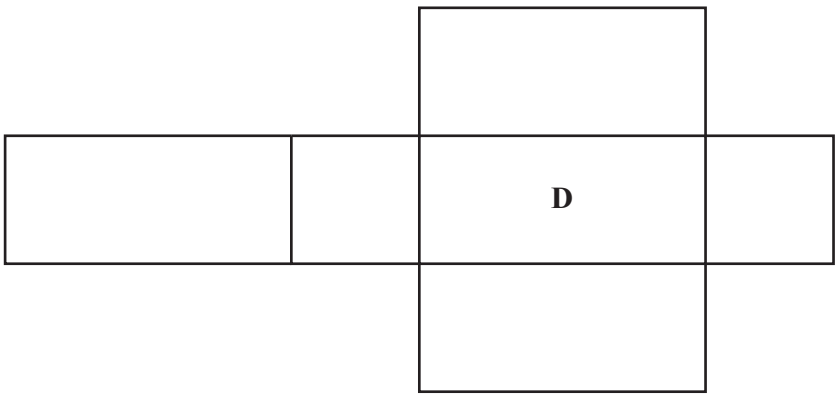
....

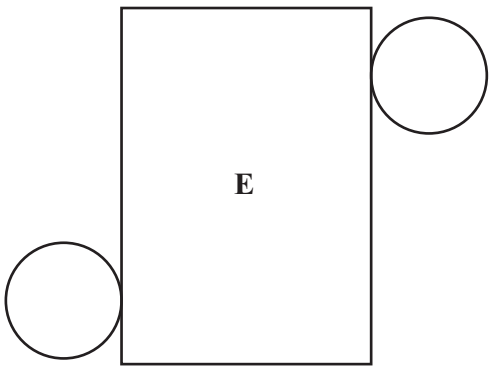
Write under each solid the letter for its net.
Choose from these diagrams.

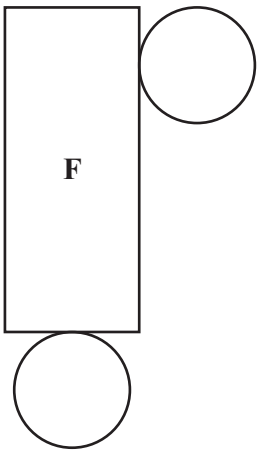












[3]

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