

Candidate forename						Candidate surname					
Centre number						Candidate number					

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION

B272A

MATHEMATICS C
(GRADUATED ASSESSMENT)

MODULE M2 (SECTION A)

TUESDAY 1 MARCH 2011: Morning

DURATION: 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

Geometrical instruments

Tracing paper (optional)

WARNING

**No calculator can be used for
Section A of this paper.**

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

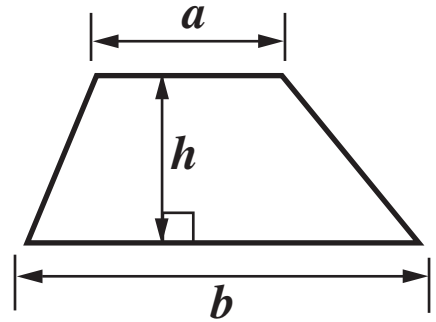
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **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.**

INFORMATION FOR CANDIDATES

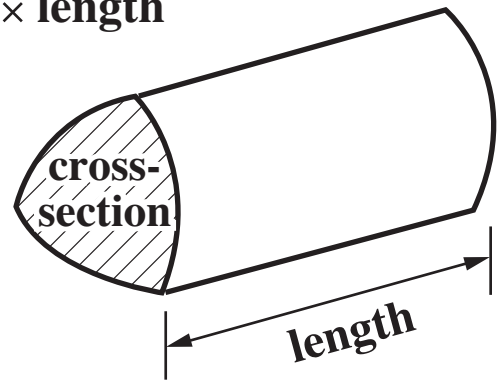
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

FORMULAE SHEET

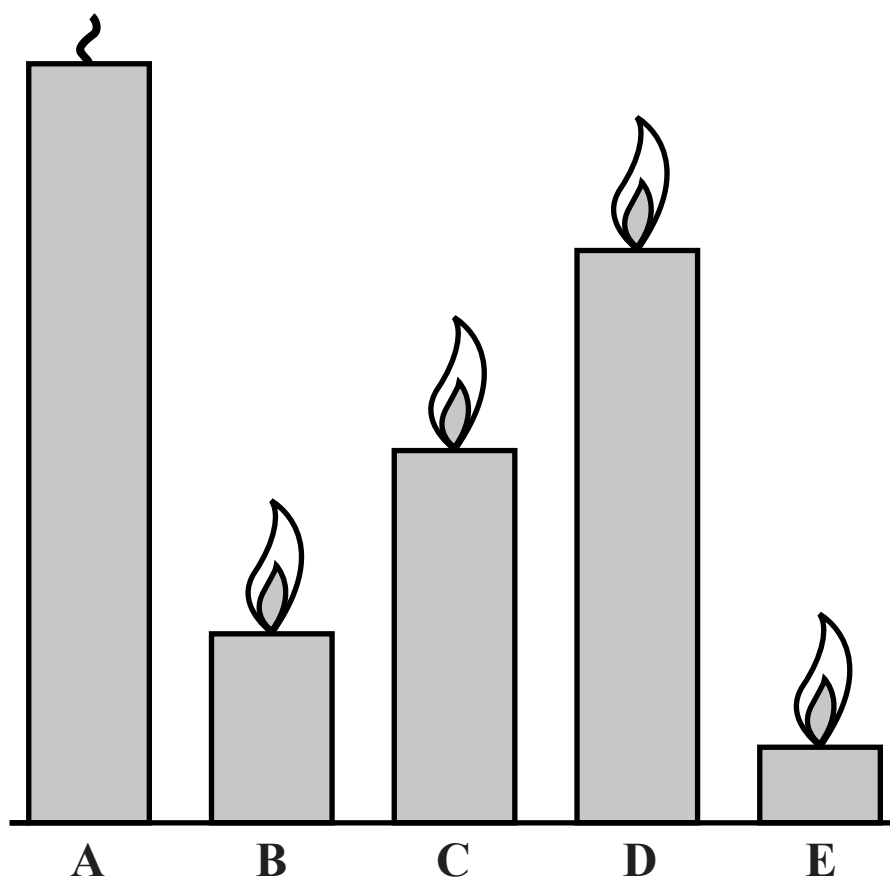
Area of trapezium $= \frac{1}{2} (a + b)h$



Volume of prism $= (\text{area of cross-section}) \times \text{length}$



- 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 marks]

- 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?
[2 marks]**

(a)(i) _____ g

- (ii) How much thicker is a £1 coin than a 50p coin?
[2 marks]**

(ii) _____ mm

- (iii) How many KILOGRAMS will thirty 20p coins weigh? [2 marks]**

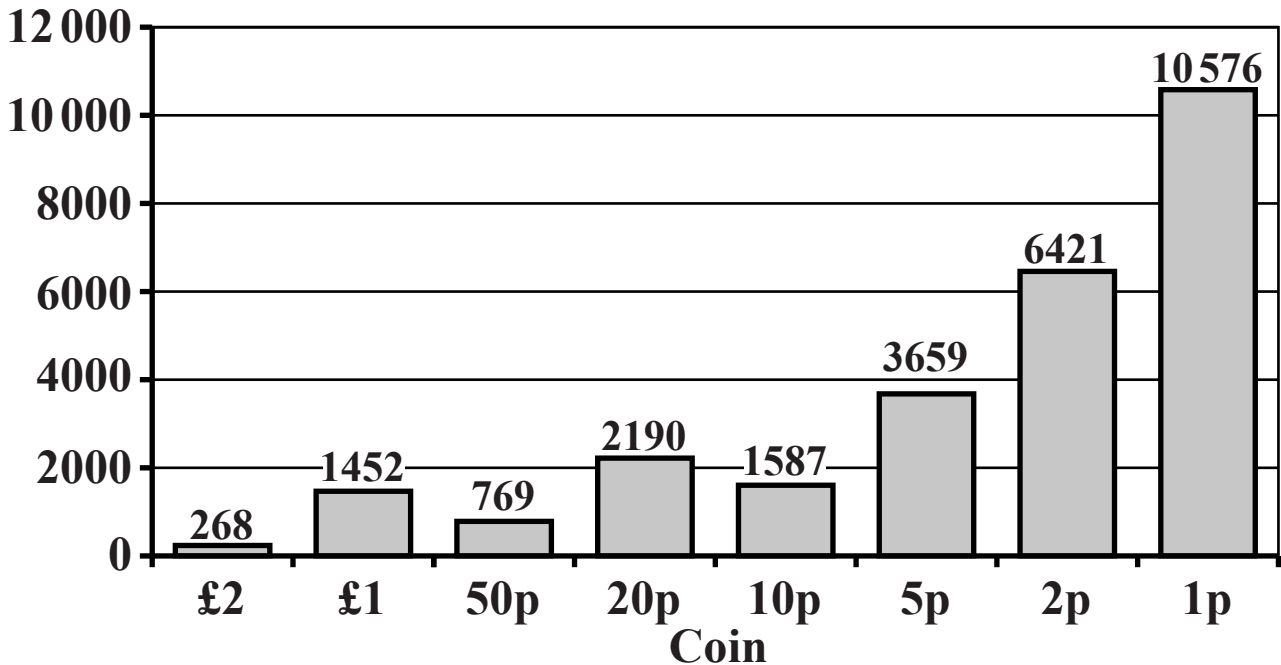
(iii) _____ kg

- (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 marks]**
-

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

COINS IN CIRCULATION

Millions of coins



Use the chart to complete these sentences.

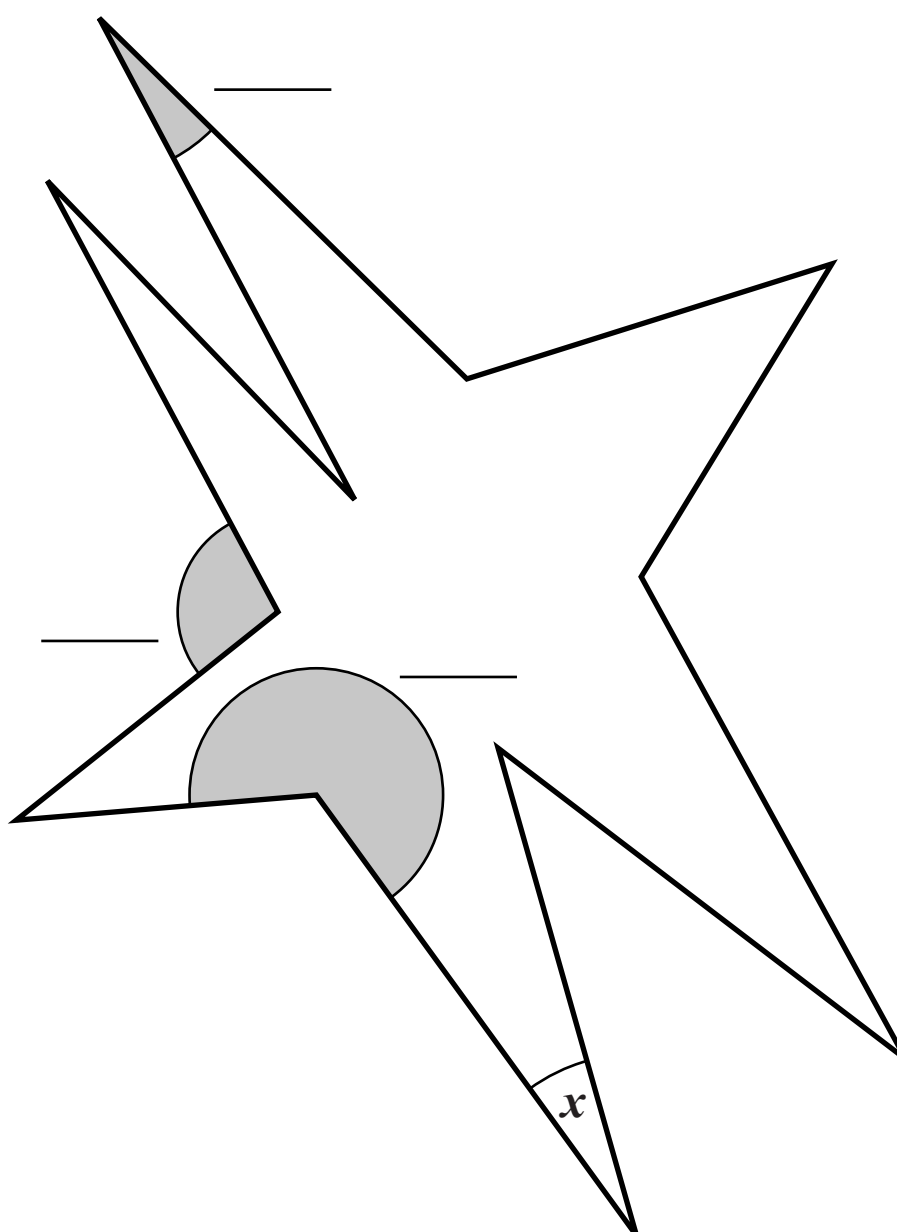
- (i) There were _____ million
£2 coins in circulation. [1 mark]
- (ii) These £2 coins were worth a total of
£ _____ million. [1 mark]
- (iii) The _____ coin had the
greatest number of coins in circulation.
[1 mark]

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

Label the shaded angles:

A for Acute
O for Obtuse
R for Reflex

[2 marks]



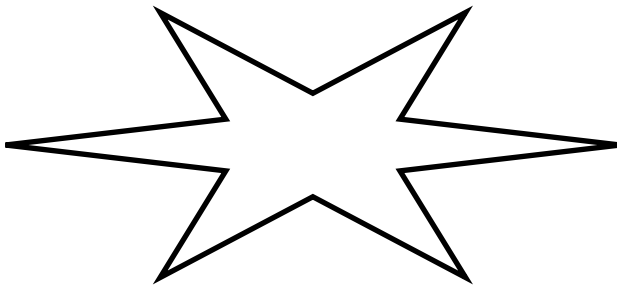
(ii) Measure the size of the angle marked x . [1 mark]

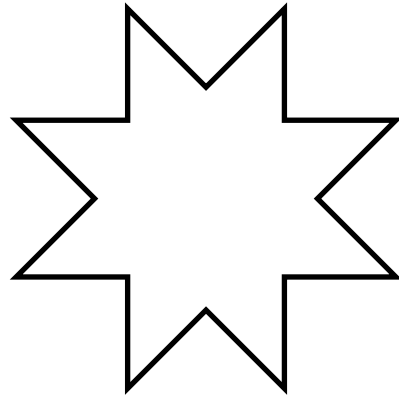
(a)(ii) _____°

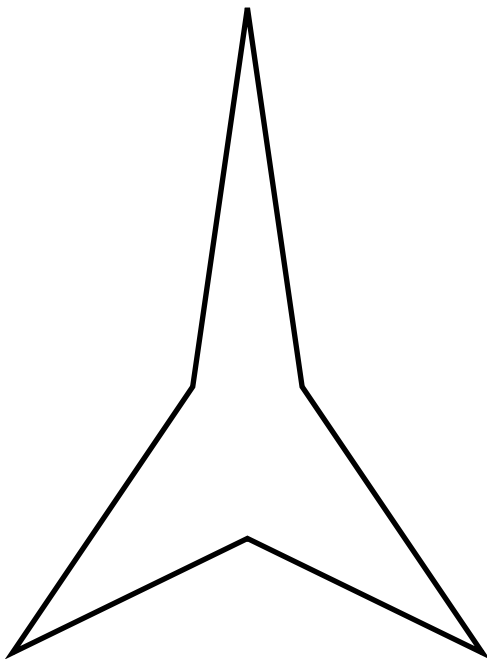
(b) Here are four star shapes.

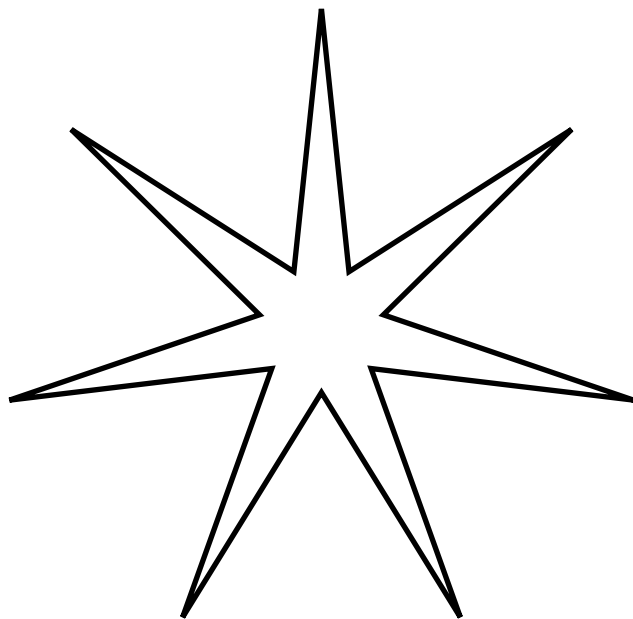
Put a tick (✓) under any that HAVE reflection symmetry.

Put a cross (X) under any that DO NOT HAVE reflection symmetry.



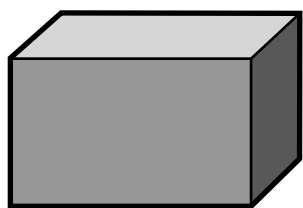


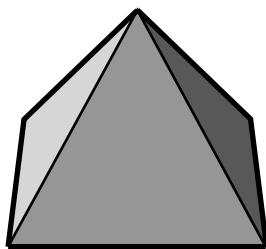


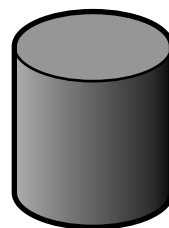


[3]

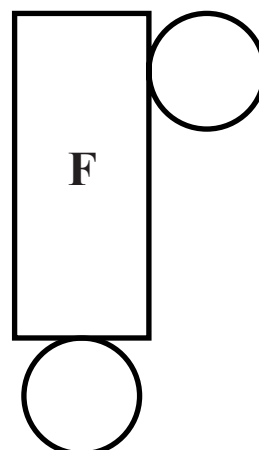
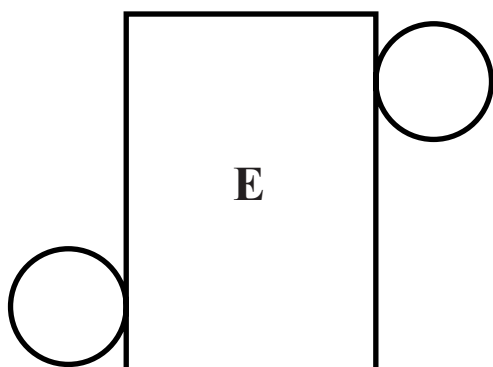
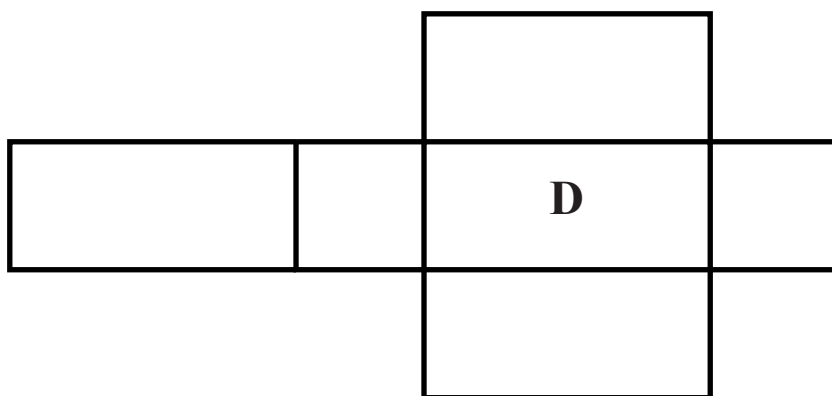
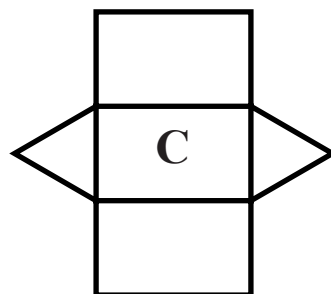
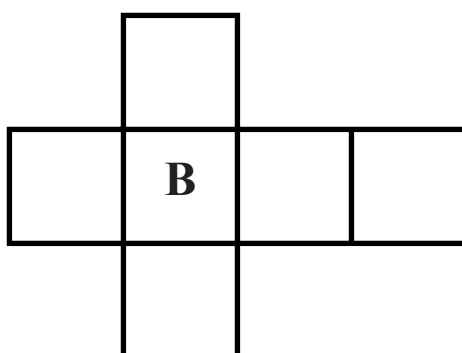
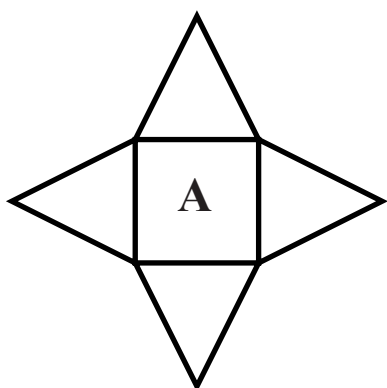
4 Here are three solids.







Write under each solid the letter for its net.
Choose from these diagrams. [3 marks]



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