M1

OCR RECOGNISING ACHIEVEMENT

GENERAL CERTIFICATE OF SECONDARY EDUCATION

MATHEMATICS C (GRADUATED ASSESSMENT)

B271A

MODULE M1 – SECTION A

Candidates answer on the question paper.

OCR supplied materials:
None

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

Thursday 20 January 2011
Morning

Duration: 30 minutes

Candidate forename		Candidate surname	

Centre number					Candidate number				

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.
• Show your working. Marks may be given for a correct method even if the answer is incorrect.
• 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).
• 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**.
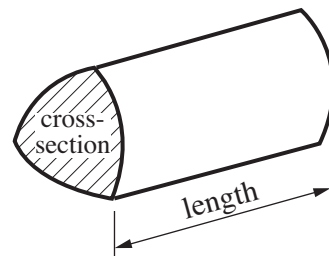• This document consists of **12** pages. Any blank pages are indicated.

WARNING

⊠ No calculator can be used for Section A of this paper

OCR is an exempt Charity

Turn over

Formulae Sheet

Area of trapezium $= \frac{1}{2}(a + b)h$
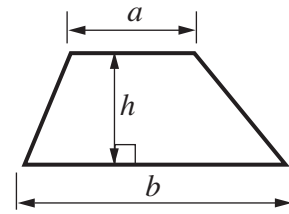
Volume of prism = (area of cross-section) × length

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1 Work out.

(a) 47 + 35 = ... **[1]**

(b) 72 − 19 = ... **[1]**

2

$\boxed{2\,mm}$ $\boxed{2\,m}$ $\boxed{20\,mm}$ $\boxed{0\cdot2\,m}$ $\boxed{20\,m}$

Choose a length from the list to complete each sentence.

2 centimetres is the same as ....

200 centimetres is the same as .... **[2]**

3 **(a)** Grace was asked to shade in one half of this shape.
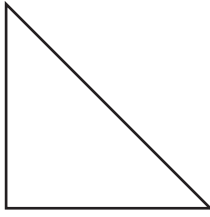
This is Grace's answer.
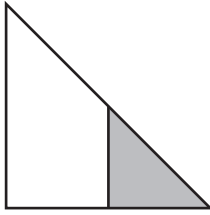
Explain how you know that Grace's answer is wrong.

.... **[1]**

(b) Shade $\frac{3}{4}$ of the shape below.
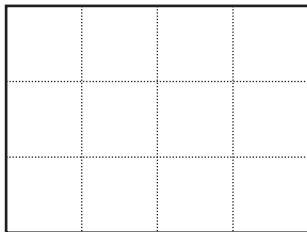
[1]

(c) Work out $\frac{1}{4}$ of 20.

(c)................................... **[1]**

4   In rugby union points are scored for tries, conversions, penalties and drop goals.
The points scored for each are shown below.

Tries	5 points each
Conversions	2 points each
Penalties	3 points each
Drop goals	3 points each

(a)   In one match, Kings Hill score 5 tries.

How many points are scored for 5 tries?

(a)..................................... **[1]**

(b)   In this match, they also score 3 conversions.

How many points are scored for 3 conversions?

(b) .... **[1]**

(c)   In another match, Cannon Heath score

4 tries,
3 conversions,
5 penalties.

Work out their total points score.

(c)..................................... **[3]**

Turn over

5 **(a)** Lara has these three number cards.

| 4 | 7 | 9 |

Write down all the different ways she can arrange these cards in a row.
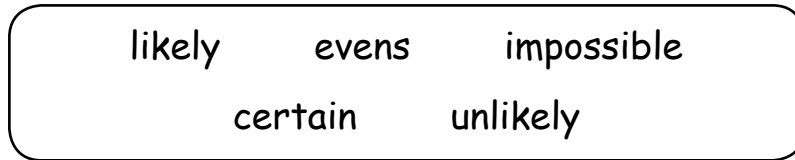The first one has been done for you.

4	7	9

You may not need all the rows.
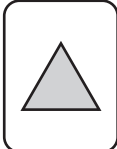
[2]
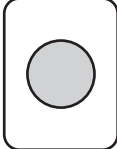
(b) Jayden has these shape cards.
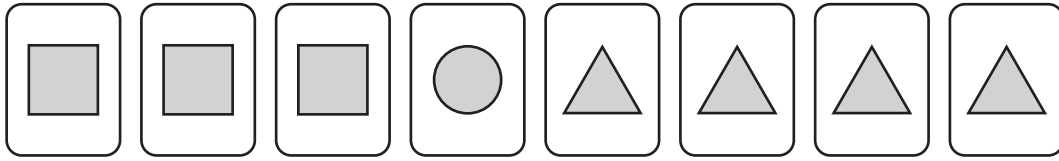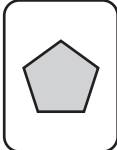
He takes one card without looking.

likely   evens   impossible

certain   unlikely

Choose the best word from this list to complete each of these sentences.

It is .... that he takes a card.

It is .... that he takes a card.

It is .... that he takes a card.   **[3]**

6 Fill in the missing numbers.

(a) 24 ⟶ | ÷ 6 ⟩ ⟶ .... **[1]**

(b) 19 ⟶ | − .... ⟩ ⟶ 11 **[1]**

7 The centre of this circle is marked.
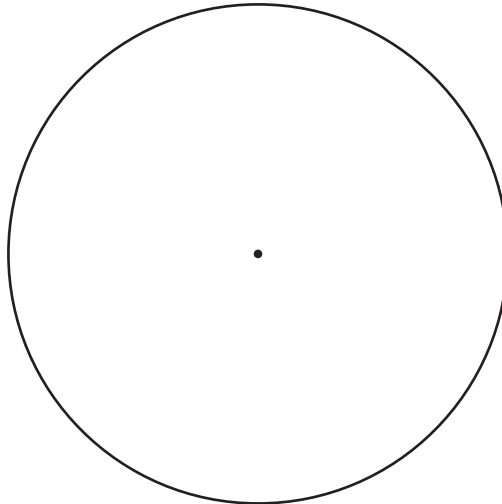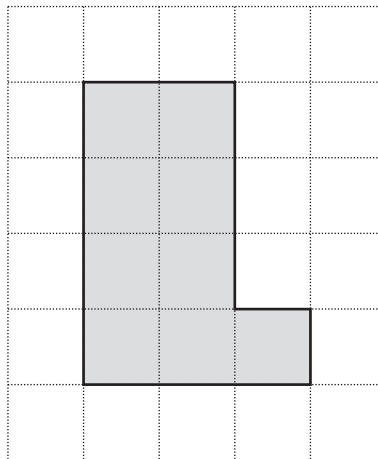

(a) Draw a radius on the circle. **[1]**

(b) Measure the radius of the circle.
Give your answer in centimetres.

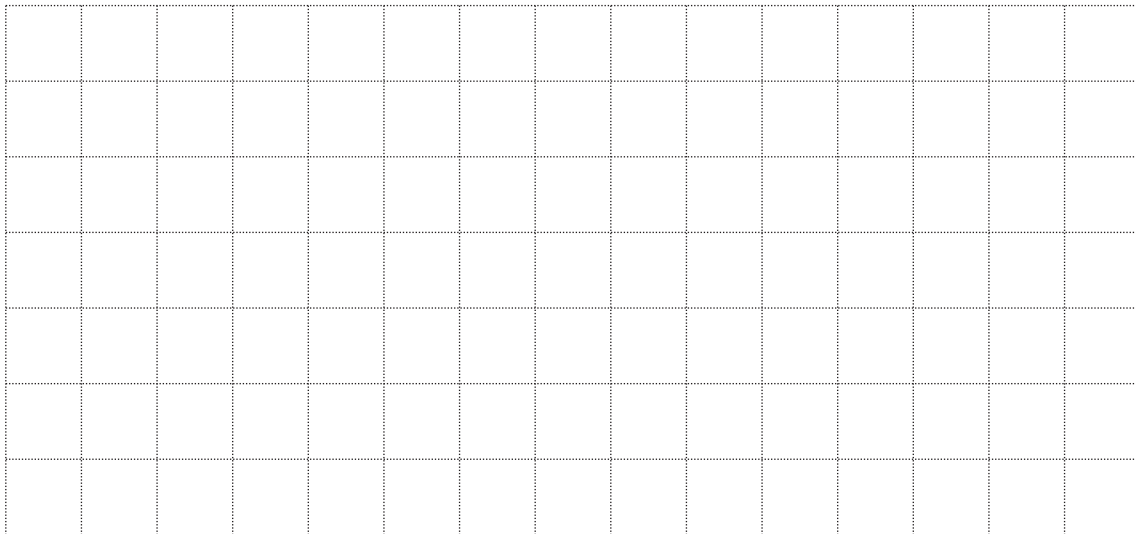(b) .... cm **[1]**

8 This L-shape is drawn on a centimetre grid.

(a) Find the perimeter of the L-shape.

(a).............................. cm **[1]**

(b) On the grid below, draw a rectangle with the same perimeter as the L-shape.

[1]

(c) Which shape has the bigger area?
Show how you decide.

Write L-shape or Rectangle.

.... because ....

.... **[2]**

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