



M2

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M2 – SECTION A**

B272A



Candidates answer on the question paper.

OCR supplied materials:
None

Other materials required:

- Geometrical instruments
- Tracing paper (optional)

**Tuesday 21 June 2011
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, 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

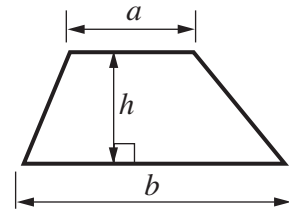
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **12** pages. Any blank pages are indicated.

WARNING

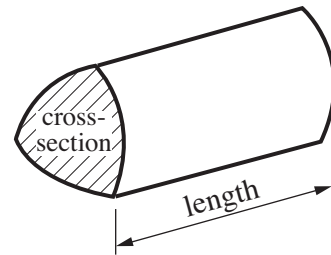
No calculator can be used for Section A of this paper

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) 36×4

(a) [1]

(b) $72 \div 3$

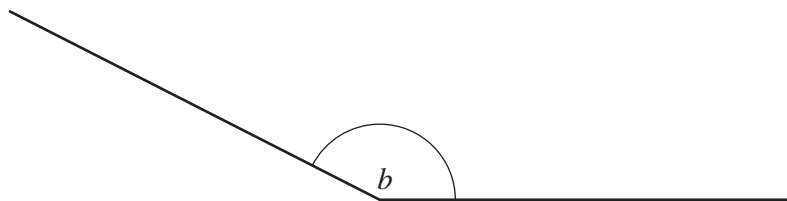
(b) [1]

2 (a) Draw an angle of 75° at A.



[1]

(b) (i) Measure angle b .

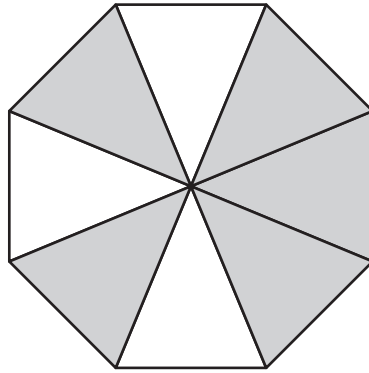


(b)(i)^o [1]

(ii) What is the mathematical name of this type of angle?

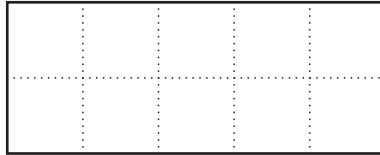
(ii) [1]

- 3 (a) What fraction of this shape is shaded?



(a) [1]

- (b) Shade $\frac{2}{5}$ of this rectangle.



[2]

- (c) (i) Write $\frac{1}{4}$ as a percentage.

(c)(i) % [1]

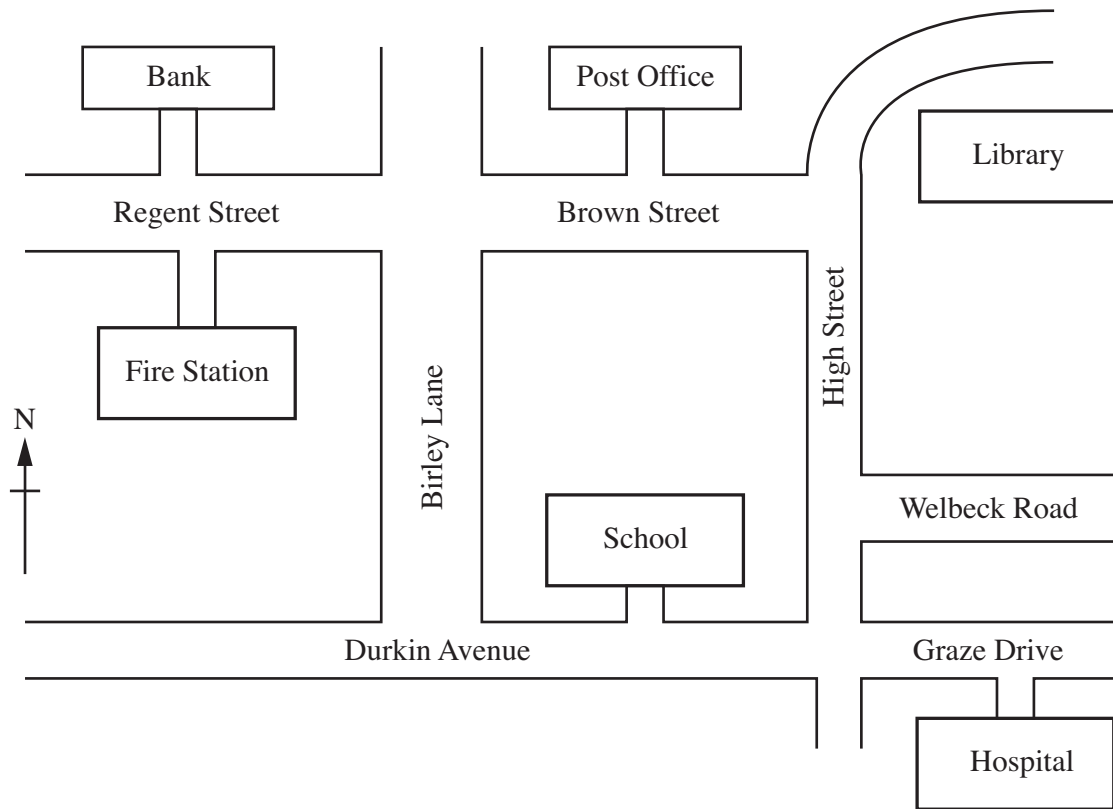
- (ii) Write 0.75 as a fraction.

(ii) [1]

- (iii) Write $\frac{6}{10}$ as a decimal.

(iii) [1]

4 This sketch map shows part of Southville.



(a) John leaves the school and turns right. At the next junction he walks North.

Which street is he in?

(a) [1]

(b) Choi is walking East along Regent Street.

Which building is on her right?

(b) [1]

(c) Complete these directions to get from the Post Office to the Hospital.

Turn out of the Post Office into Brown Street.

Turn right into

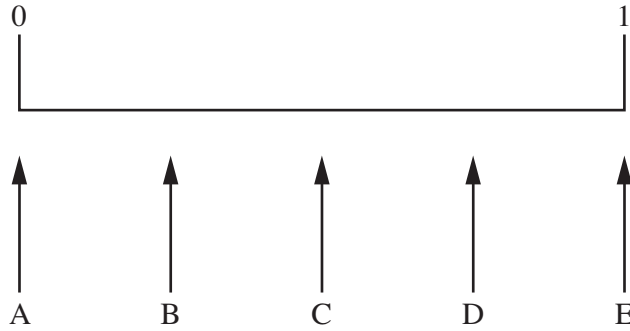
Then turn second into Graze Drive.

[2]

5 (a) Katy has 16 bottles of nail varnish.

- 3 are blue
- 4 are green
- 1 is pink
- the rest are red

Katy takes a bottle of nail varnish without looking.



(i) Which arrow shows the probability that Katy takes a bottle of green nail varnish?

(a)(i) [1]

(ii) Which arrow shows the probability that Katy takes a bottle of orange nail varnish?

(ii) [1]

(b) Katy buys lip gloss costing £3.50 and mascara costing £14.95. She pays with a £20 note.

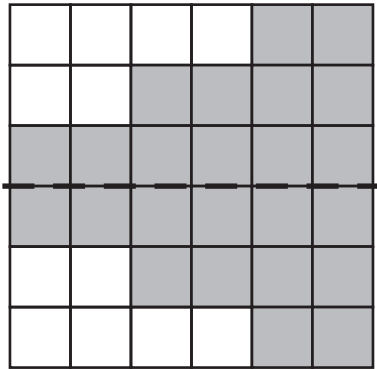
How much change should Katy get?

(b) £ [2]

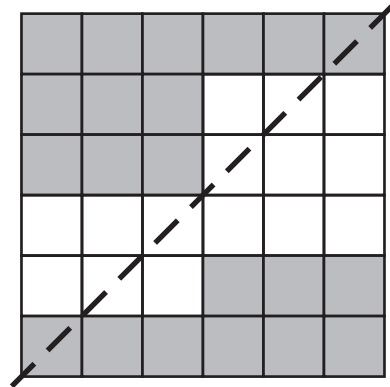
6 (a) Here are some patterns.

Write Yes under each pattern that has reflection symmetry.

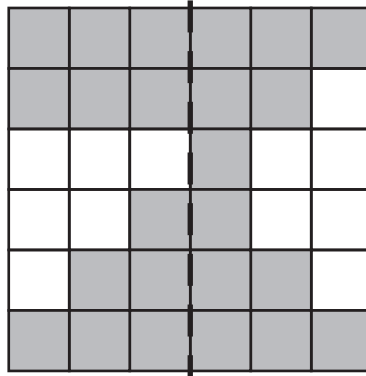
Write No under each pattern that does not have reflection symmetry.



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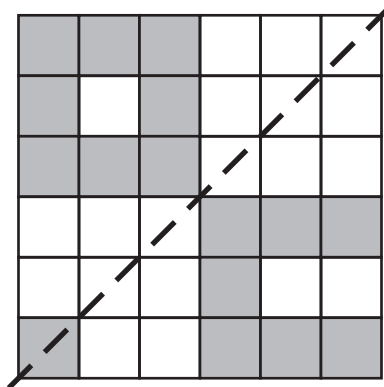
.....



.....

[2]

(b) Shade **one** more square on the pattern below so that it has reflection symmetry about the dashed line.



[1]

7 Here is the start of a number pattern.

9 12 15 18 21

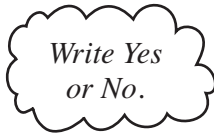
(a) (i) What is the next number in this pattern?

(a)(i) [1]

(ii) Explain how you worked out your answer.

..... [1]

(b) Is 48 in this number pattern?
Give a reason for your answer.



..... because

..... [1]

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