

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

B272A

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M2 (SECTION A)

TUESDAY 21 JUNE 2011: Afternoon

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

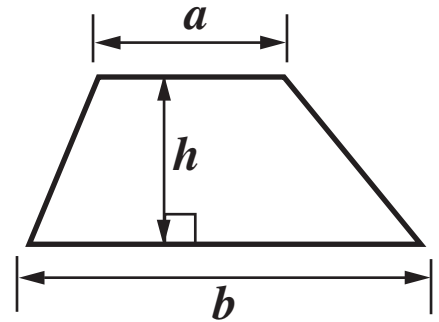
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**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

INFORMATION FOR CANDIDATES

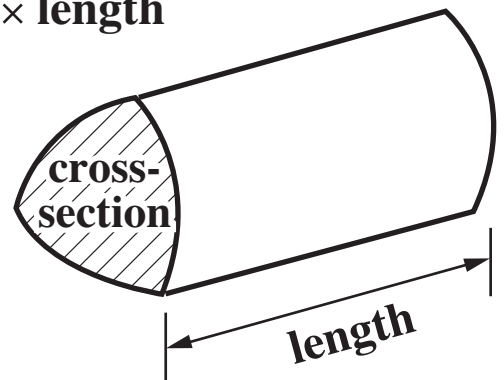
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

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



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



1 Work out.

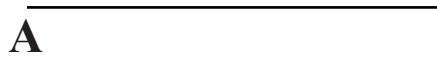
(a) 36×4

(a) _____ [1]

(b) $72 \div 3$

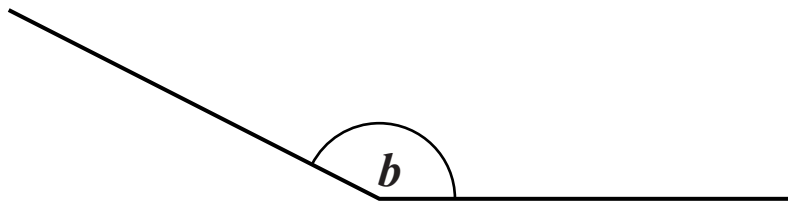
(b) _____ [1]

2 (a) Draw an angle of 75° at A.



[1]

(b) (i) Measure angle b .

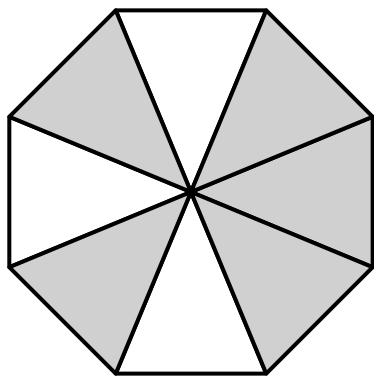


(b)(i) _____^o [1]

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

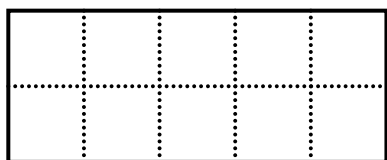
(ii) _____ [1]

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]

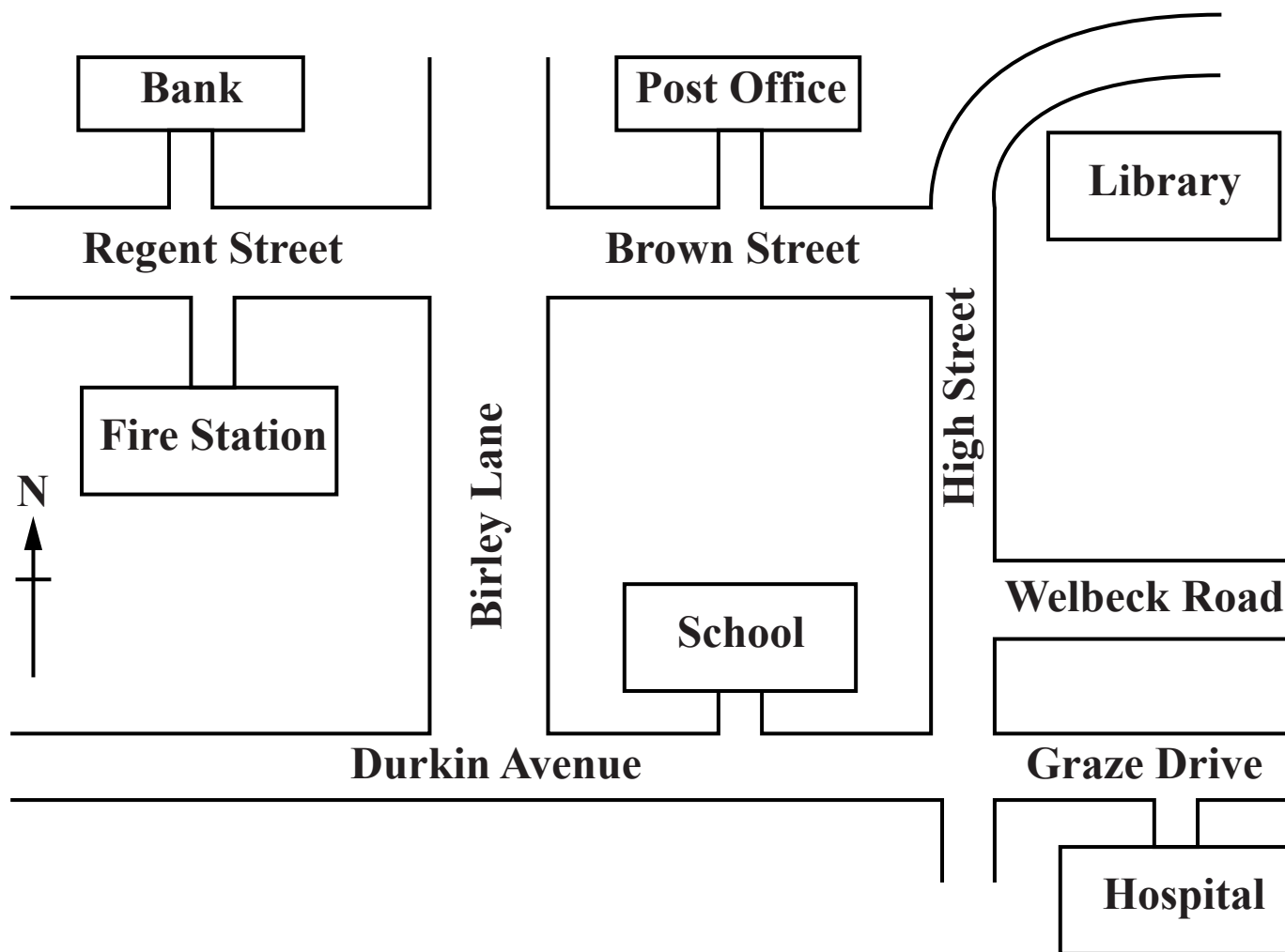
(ii) Write 0.75 as a fraction.

(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 _____ .

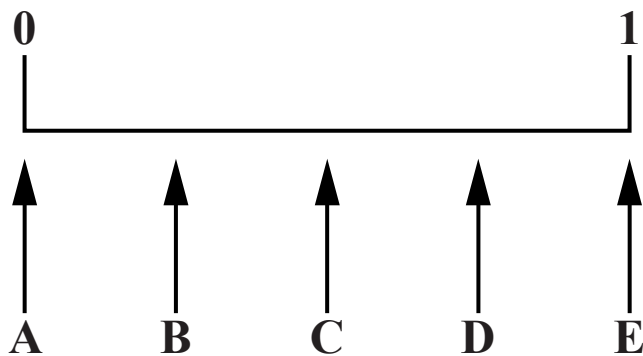
Then turn second _____ into Graze Drive.

[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.**

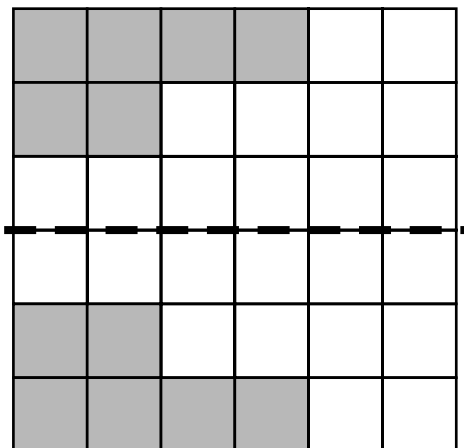
How much change should Katy get?

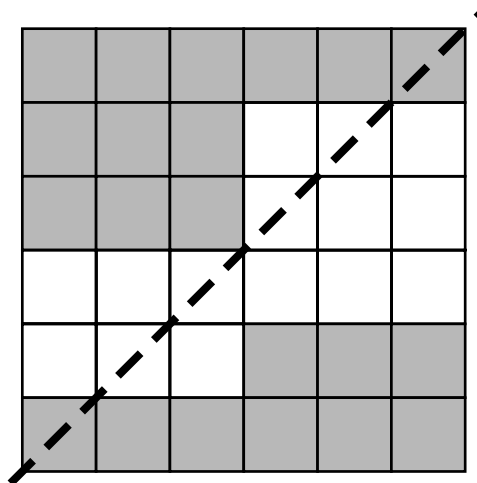
(b) £ _____ [2]

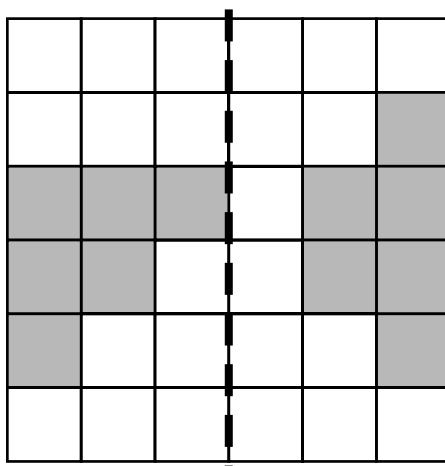
6 (a) Here are three patterns.

Write Yes under each pattern that has reflection symmetry.

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

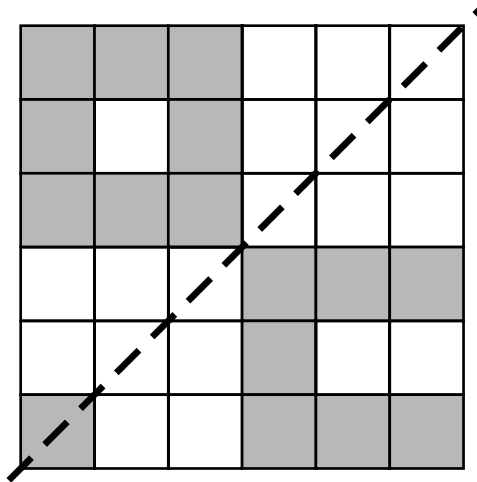






[2]

(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

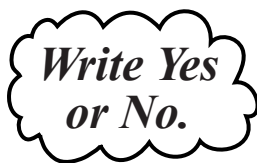
(a) (i) What is the next number in this pattern?

(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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