MATHEMATICS C
(Graduated Assessment)

MODULE M7 – SECTION A

1966/2337A

Wednesday   **28 JUNE 2006**   Morning   30 minutes

Candidates answer on the question paper.
Additional materials:
    Geometrical instruments
    Tracing paper (optional)

Candidate Name	

Centre Number					

Candidate Number				

TIME 30 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- In many questions marks will be given for a correct method even if the answer is incorrect.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED.
  ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.

INFORMATION FOR CANDIDATES

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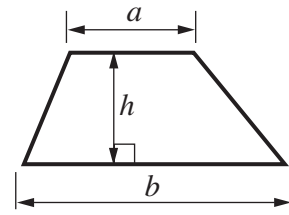- The total number of marks for this Section is 25.

WARNING

You are not allowed to use a calculator in Section A of this paper.
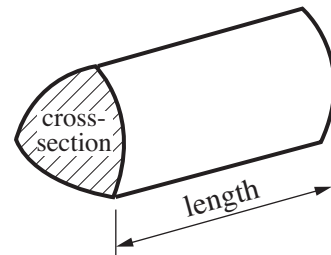
FOR EXAMINER'S USE	
Section A	
Section B	
TOTAL	

This question paper consists of 8 printed pages.

[Turn over

Formulae Sheet

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

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

PLEASE DO NOT WRITE ON THIS PAGE

1 Write down the prime numbers between 30 and 40.

....[2]

2 **(a)** The charges at one hotel for a wedding reception are
£360 for hiring the room plus £20 per person.

Write down a formula for the charge, £C, for a wedding reception
for n people at this hotel.

(a) ....[2]

(b) Another hotel uses the following formula to
work out the charge, £C, for a party for n people.

$$C = 7n + 40$$

Marie is charged £250 for a party at this hotel.

How many people were at her party?

(b) ....[2]

[Turn over

3 In a children's ball-pool there are green, yellow, orange and blue balls.

Ramy picks a ball up at random.

This table shows the probabilities of obtaining each colour.

Colour	Probability
Green	0·2
Yellow	0·3
Orange	0·4
Blue	

(a) Complete the table.   [2]

(b) There are 1000 balls in the ball-pool.

How many of them are yellow?

(b) ....[2]

4

4   Work out.

(a) $\dfrac{3}{4} - \dfrac{1}{6}$

(a) ....[2]

(b) $2\dfrac{1}{4} \times \dfrac{1}{6}$

Give your answer as a fraction in its simplest terms.

(b) ....[3]

5

[Turn over

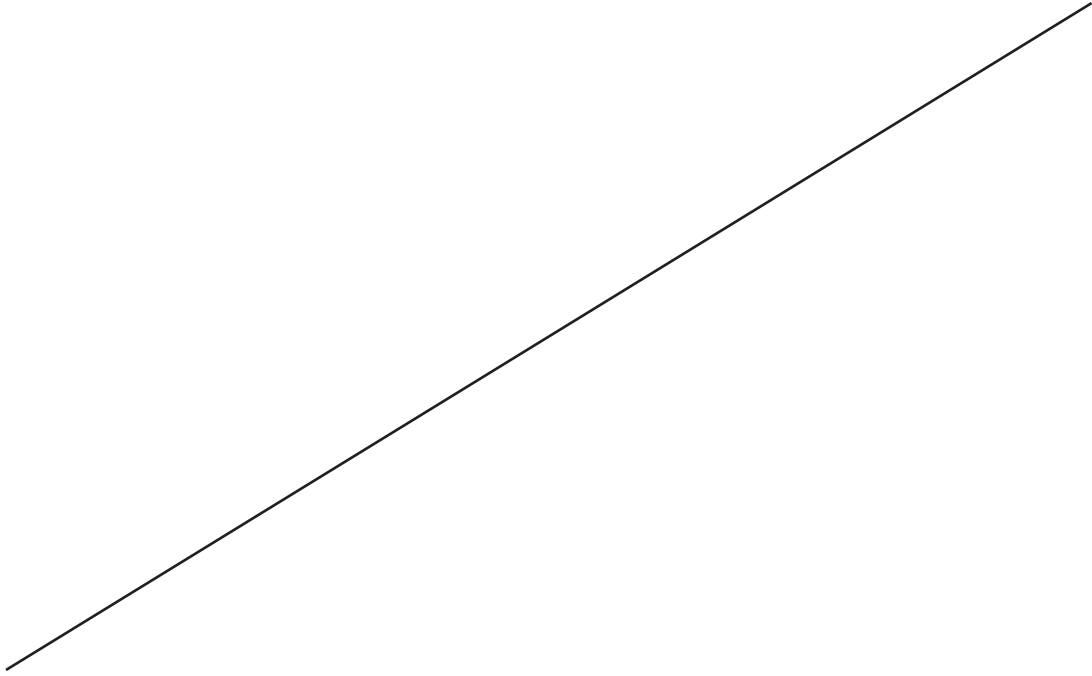**5**   Using ruler and compasses only, construct the perpendicular from P to the line.
Leave in your construction lines.

.P

[2]

2

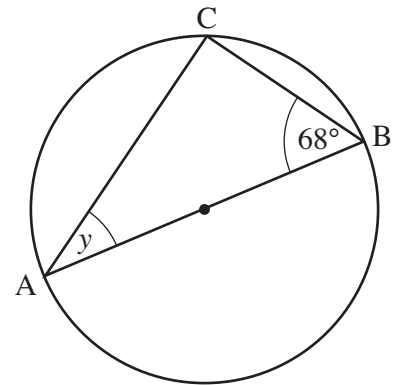**6**	**(a)**	The exterior angle of a regular polygon is 40°.

How many sides does the polygon have?

(a) ....[2]

(b)	A, B and C are points on the circumference of this circle.
AB is a diameter.
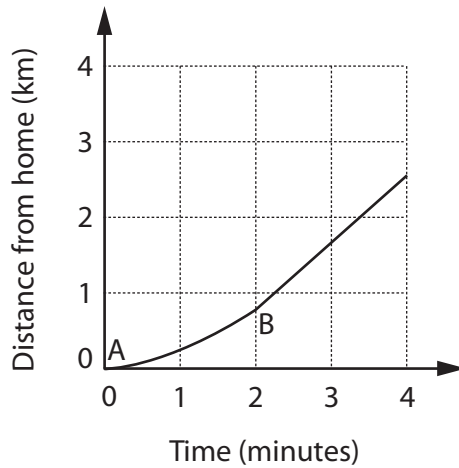
Find angle *y*, giving your reasons.

Not to scale

y = ...° because ....

....[2]
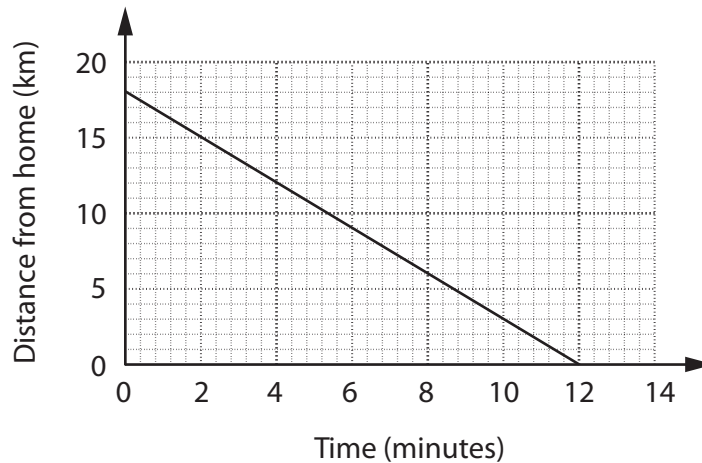
4

TURN OVER FOR QUESTION 7

7 (a) This graph represents the first part of Ian's journey.

What does the shape of the curve from A to B tell you about Ian's speed?

....

....[1]

(b) This graph represents Sarah's journey home.

Calculate Sarah's speed.
Give your answer in kilometres per hour.

(b) ....km/h [3]

4