

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
 MATHEMATICS C (GRADUATED ASSESSMENT)
 MODULE M6 – SECTION B**

M6

MONDAY 21 JANUARY 2008

Morning
 Time: 30 minutes

Candidates answer on the question paper

Additional materials: Geometrical instruments
 Tracing paper (optional)
 Scientific or graphical calculator



Candidate
 Forename

Candidate
 Surname

Centre
 Number

--	--	--	--	--

Candidate
 Number

--	--	--	--

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that 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.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Do **not** write outside the box bordering each page.
- Write your answer to each question in the space provided.

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.
- Section B starts with question 7.
- You are expected to use a calculator in Section B of this paper.
- Use the π button on your calculator or take π to be 3.142 unless the question says otherwise.

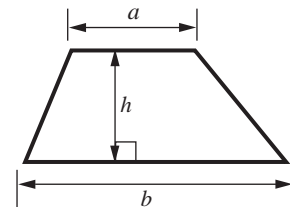
FOR EXAMINER'S USE

SECTION B

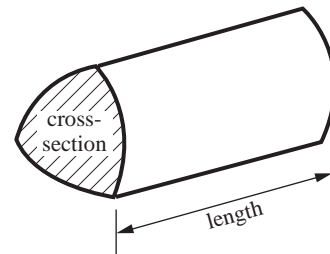
This document consists of **8** printed pages.

Formulae Sheet

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



Volume of prism = (area of cross-section) \times length



PLEASE DO NOT WRITE ON THIS PAGE

7 Calculate.

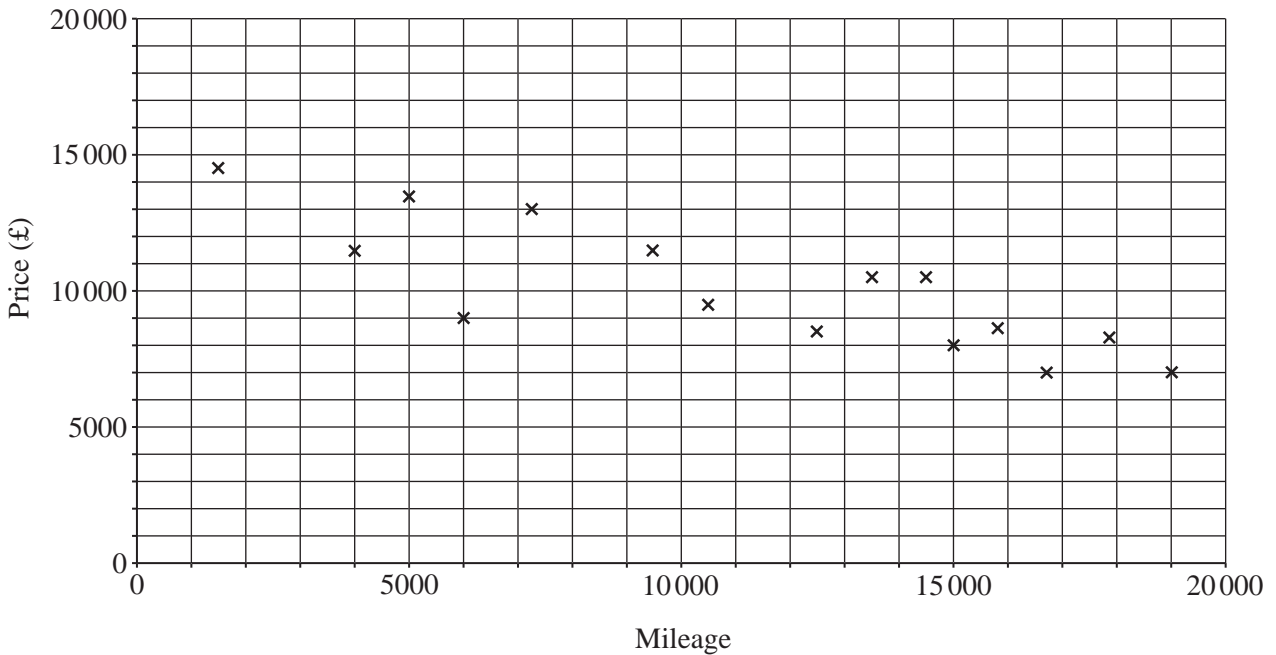
$$\frac{6.9 - 4.15}{2.8 - 1.75}$$

Give your answer correct to one decimal place.

..... [2]

2

8 A dealer sells used cars.
This scatter diagram shows the price and the mileage for some of the cars he sells.
All these cars are the same model.



(a) Draw a line of best fit for these data. [1]

(b) Use your line of best fit to estimate the price for a car of this model which has done 8000 miles.

(b) £ [1]

(c) Give a reason why the dealer may ask a lower price for this car than your estimate in part (b).

.....
..... [1]

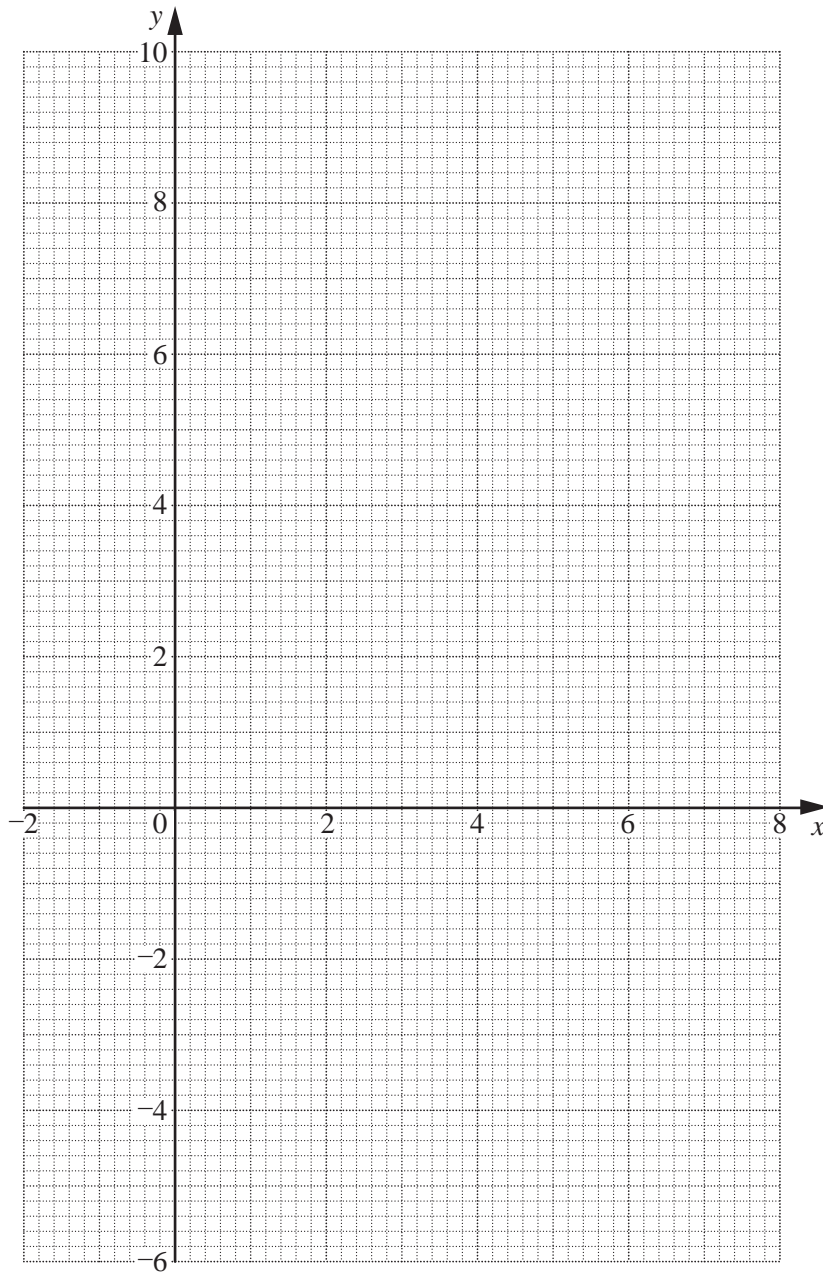
3

- 9 (a) Complete this table for $y = 8 - 2x$.

x	0	2	4	6
y		4		

[1]

- (b) Draw the graph of $y = 8 - 2x$.



[2]

3	
---	--

10 Jan uses 2.5 litres of paint to cover an area of 80 m².

Jan needs to paint an area of 440 m².

How many litres of paint does she need?

..... [3]

3

11 (a) A gardener planted 600 red tulips and 240 yellow tulips.

Work out the ratio of red to yellow tulips.
Give your answer in its simplest form.

(a)..... : [2]

(b) He also planted some crocus bulbs and daffodil bulbs.

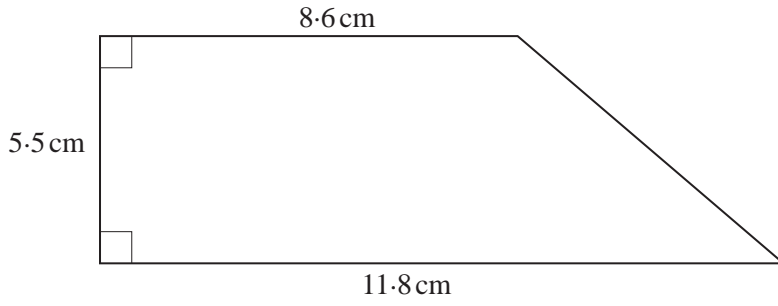
The ratio of crocus bulbs to daffodil bulbs is 1 : 5.
He planted 420 bulbs altogether.

How many crocus bulbs did he plant?

(b)..... [2]

4

12 (a)

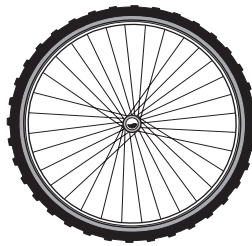


Not to scale

Calculate the area of this trapezium.
Give the units of your answer.

(a)..... [3]

(b)



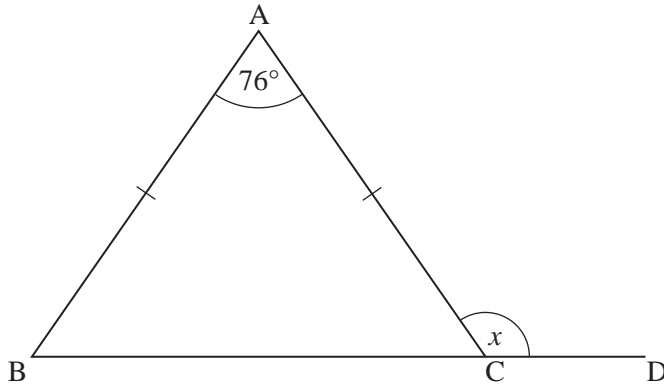
The diameter of this wheel is 120 cm.

Calculate the circumference of the wheel.

(b) cm [2]

5

13



Not to scale

In the diagram, $AB = AC$ and BCD is a straight line.

Work out angle x .

Give a reason for each step of your answer.

$x = \dots\dots\dots^\circ$ because $\dots\dots\dots$

$\dots\dots\dots$

$\dots\dots\dots$ [5]

5

PLEASE DO NOT WRITE ON THIS PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (OCR) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

OCR is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.