www.PapaCambridge.com

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

5564235406

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/01**

Paper 1 (Core) **October/November 2010**

45 minutes

Candidates answer on the Question Paper

Additional Materials: Geometrical Instruments

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
Do not use staples, paper clips, highlighters, glue or correction fluid.
You may use a pencil for any diagrams or graphs.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** the questions.
CALCULATORS MUST NOT BE USED IN THIS PAPER.
All answers should be given in their simplest form.
You must show all the relevant working to gain full marks and you will be given marks for correct methods even if your answer is incorrect.
The number of marks is given in brackets [ ] at the end of each question or part question.
The total number of marks for this paper is 40.

For Examiner's Use

This document consists of **10** printed pages and **2** blank pages.

© UCLES 2010

www.PapaCambridge.com

Formula List

Area, A, of triangle, base b, height h.	$A = \frac{1}{2}bh$
Area, A, of circle, radius r.	$A = \pi r^2$
Circumference, C, of circle, radius r.	$C = 2\pi r$
Curved surface area, A, of cylinder of radius r, height h.	$A = 2\pi rh$
Curved surface area, A, of cone of radius r, sloping edge l.	$A = \pi rl$
Curved surface area, A, of sphere of radius r.	$A = 4\pi r^2$
Volume, V, of prism, cross-sectional area A, length l.	$V = Al$
Volume, V, of pyramid, base area A, height h.	$V = \frac{1}{3}Ah$
Volume, V, of cylinder of radius r, height h.	$V = \pi r^2 h$
Volume, V, of cone of radius r, height h.	$V = \frac{1}{3}\pi r^2 h$
Volume, V, of sphere of radius r.	$V = \frac{4}{3}\pi r^3$

www.PapaCambridge.com

Answer **all** the questions.

For iner's

1 **(a)** Find the lowest common multiple of 6 and 9.

Answer(a) ..... [1]

(b) Work out $5^2 - 2^3$.

Answer(b) ..... [2]

---

2 **(a)** Samir and Josef divide \$250 in the ratio 2 : 3.

Calculate how much money each receives.

Answer(a) Samir \$ .....

Josef \$ ..... [2]

(b) A recipe for 3 people needs 600 g of pasta.

Work out how much pasta is needed for 8 people.

Answer(b) ..... g [2]

---

www.PapaCambridge.com

For
iner's

3 $P(2, 3)$ and $Q(4, 7)$ are two points.

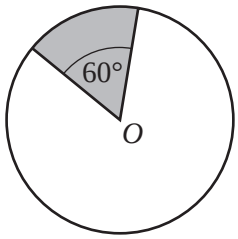
(a) Find the gradient of the line joining P and Q.

Answer(a) ..... [2]

(b) Find the co-ordinates of the midpoint of the line joining P and Q.

Answer(b) (..... , ...) [1]

4



NOT TO
SCALE

A circle, centre O, has an area of 600 cm^2.

Find the area of the shaded sector.

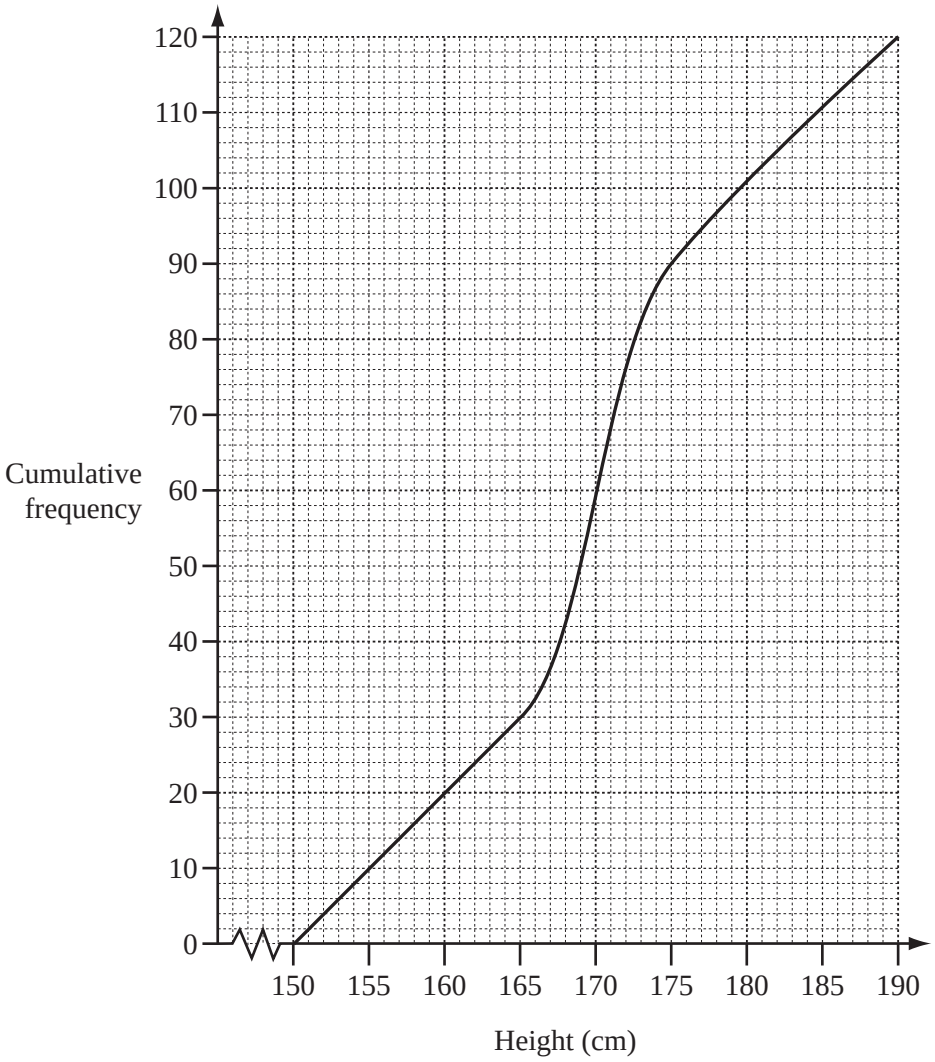
Answer ..... cm^2 [2]

---

www.PapaCambridge.com

For
iner's

5 The heights of a number of students were measured.
The results are shown in the cumulative frequency diagram.



(a) How many students were measured?

Answer(a) ..... [1]

(b) Find the interquartile range.

Answer(b) ..... cm [2]

www.PapaCambridge.com

For
iner's

6

Diagram 1 Diagram 2 Diagram 3 Diagram 4

(a) Draw Diagram 4 in this sequence. [1]

(b) **(i)** Write down, as a sequence, the number of dots in each diagram.

Answer(b)(i) ..... , ... , ... , ... [1]

(ii) Write down the nth term of this sequence.

Answer(b)(ii) ..... [1]

---

7 Solve the simultaneous equations $2x = y + 8$ and $3x + 2y = 5$.

Answer $x =$ .....

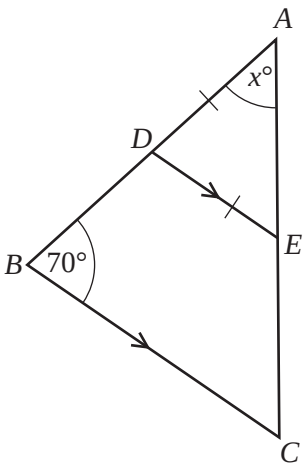
$y =$ ..... [4]

---

www.PapaCambridge.com

For
iner's

8 (a)



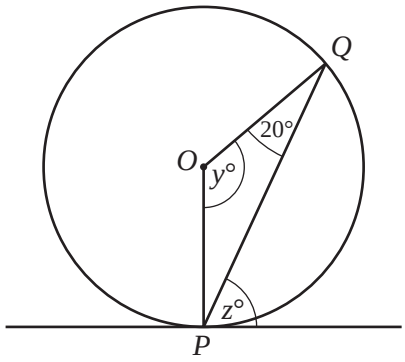
NOT TO SCALE

In the diagram DE is parallel to BC.
$AD = DE$ and angle $ABC = 70°$.

Find the value of x.

Answer(a) $x =$ ..... [2]

(b)



NOT TO SCALE

The diagram shows a circle, centre O, with a tangent drawn at P.
Angle $OQP = 20°$.

Find the values of y and z.

Answer(b) $y =$ ..... [1]

$z =$ ..... [1]

www.PapaCambridge.com

For
iner's

9 **(a)** Expand the brackets and simplify.

$$3(x - y) - 2(x - 5y)$$

Answer(a) ..... [2]

(b) Factorise completely.

$$3x^2 + 9xy^2$$

Answer(b) ..... [2]

(c) Write as a single fraction.

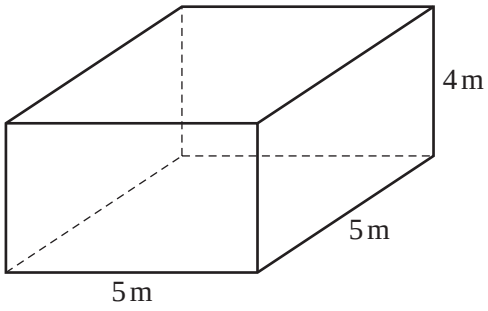
$$\frac{2x}{3} - \frac{x}{5}$$

Answer(c) ..... [2]

www.PapaCambridge.com

For
iner's

10



NOT TO SCALE

A cuboid has a square base of side 5 m and a height of 4 m.

(a) Calculate the volume of the cuboid.

Answer(a) ..... m^3 [1]

(b) Calculate the total surface area of the cuboid.

Answer(b) ..... m^2 [2]

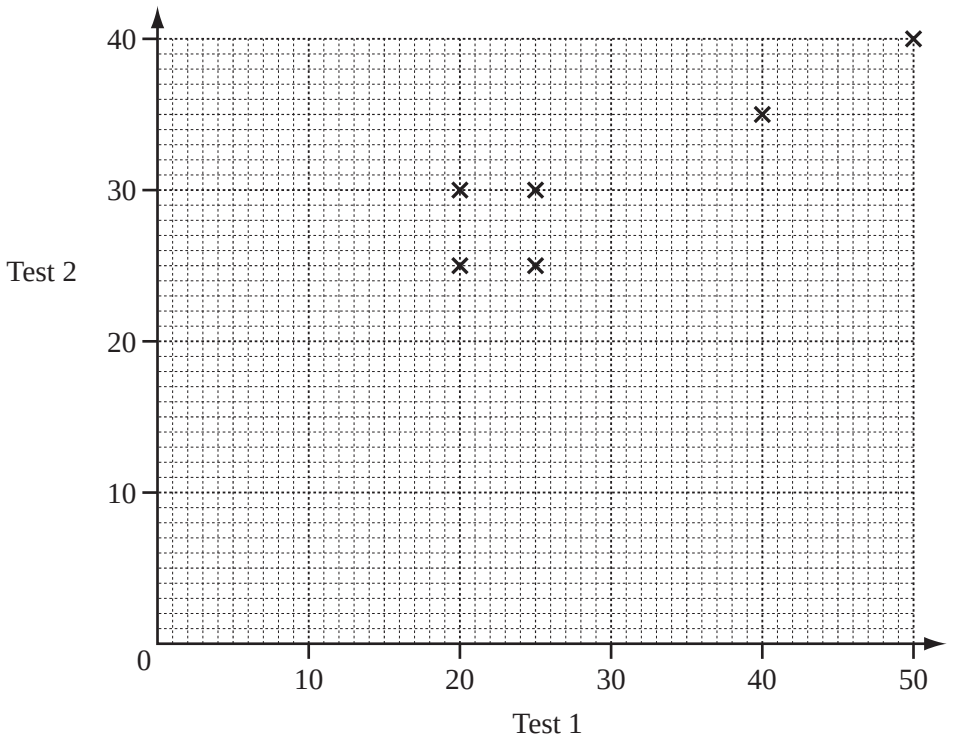
www.PapaCambridge.com

For
iner's

11

Student	A	B	C	D	E	F	G	H
Test 1	25	20	40	25	50	20	30	40
Test 2	30	25	35	25	40	30	35	40

The table shows the marks scored by 8 students in two mathematics tests.
The marks for students A to F are shown on the scatter diagram below.



(a) On the diagram, plot the marks for students G and H. [1]

(b) The mean for Test 1 is 31.25.

Calculate the mean for Test 2.

Answer(b) ..... [2]

(c) Plot the mean point on the scatter diagram. [1]

(d) Draw the line of best fit on the scatter diagram. [1]

BLANK PAGE

www.PapaCambridge.com

BLANK PAGE

www.PapaCambridge.com

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 (UCLES) 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.

University of Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of