Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

9405264055

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **May/June 2017**

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, glue or correction fluid.
You may use an HB 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.

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

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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.	$V = \frac{4}{3}\pi r^3$

Answer **all** the questions.

1 **(a)** Change 4.3 metres into millimetres.

..... mm [1]

(b) Change 60 hours into days.

..... days [1]

2 Write down a square number between 20 and 30.

..... [1]

3 Insert brackets to make this calculation correct.

$24 - 12 \div 3 = 4$ [1]

4 Find the lowest common multiple (LCM) of 6 and 15.

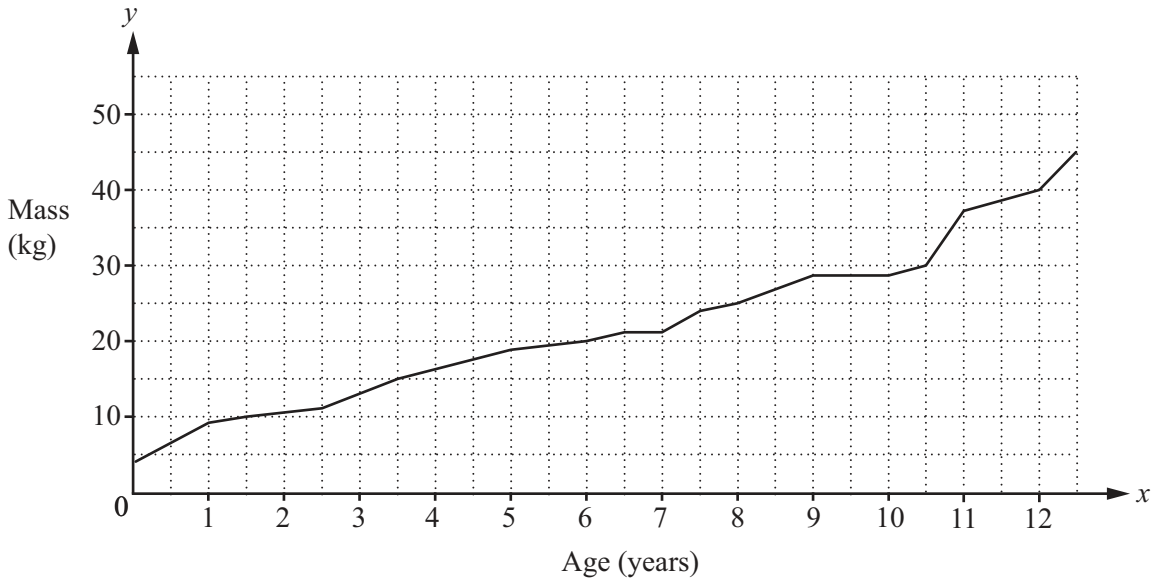
..... [2]

5 Draw an angle of 73° at A.

A

[1]

6 The diagram shows how Ken's mass, in kilograms, has increased with his age, in years.



(a) Write down Ken's mass when he was 6 years old.

..... kg [1]

(b) Write down Ken's age when his mass was 30 kg.

..... years [1]

7 A tray contains 5 pink cakes, 6 green cakes and 1 yellow cake only.
Hattie chooses one cake at random.

Complete the table.

Probability of choosing a pink cake	
Probability of choosing a green cake	$\frac{1}{2}$
Probability of choosing a yellow cake	
Probability of choosing a blue cake	

[3]

8 Write down the gradient of the line $y = 7 - x$.

.....

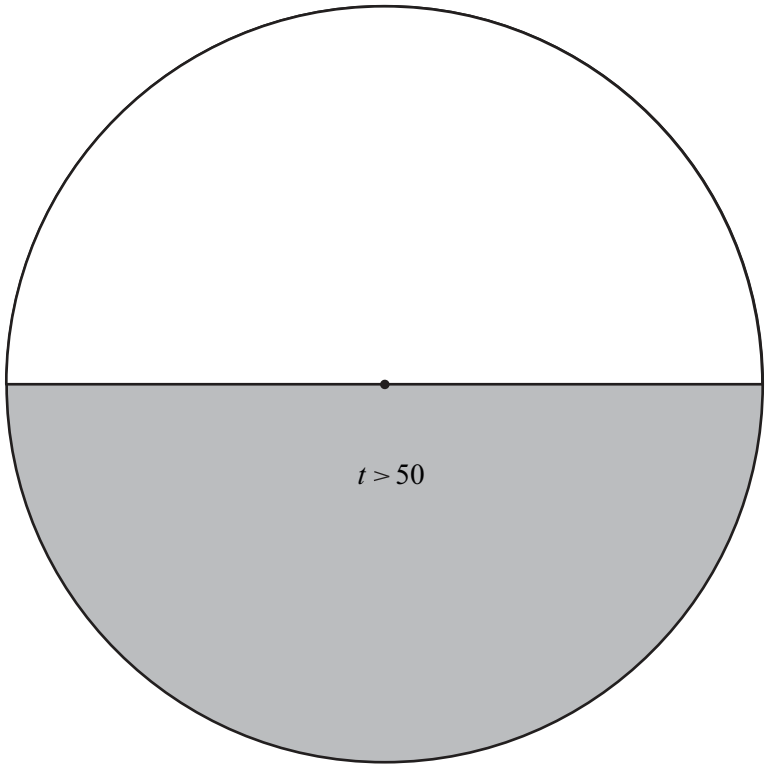
[1]

9 Raphael is drawing a pie chart for the time, t minutes, that 90 students spend on the internet each day.

Time (t minutes)	Frequency	Sector Angle
$0 < t \leqslant 10$	10	
$10 < t \leqslant 30$	15	
$30 < t \leqslant 50$	20	
$t > 50$	45	180°

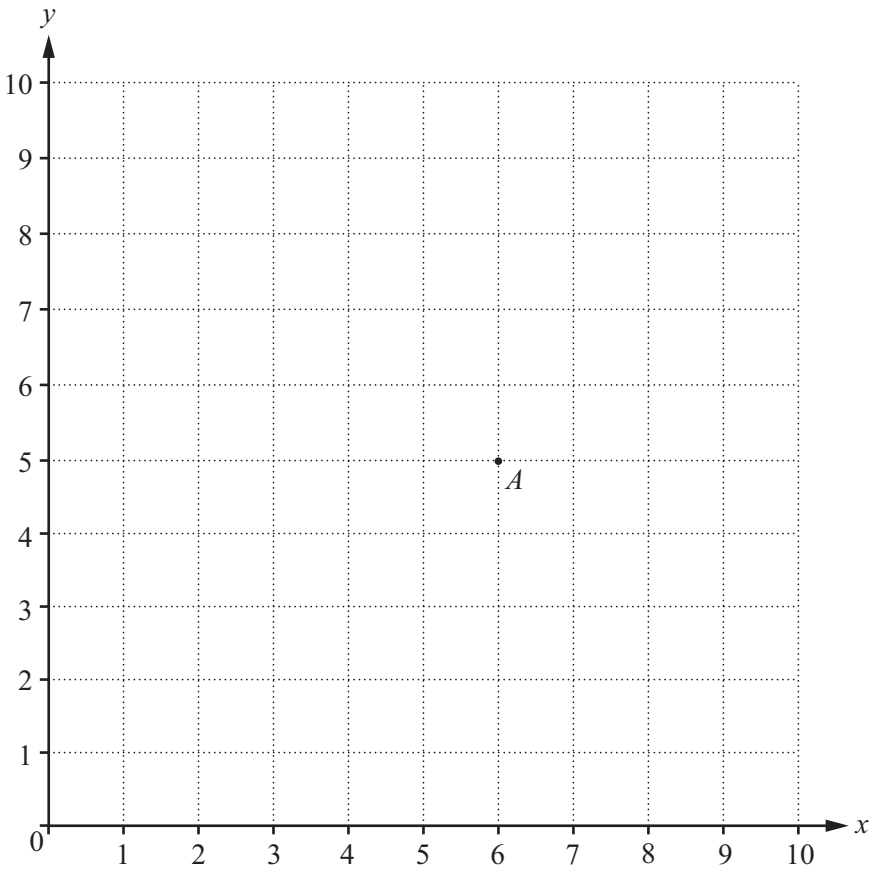
(a) Complete the table to show the sector angles in the pie chart. [2]

(b) Complete the pie chart to show this information.
Label each sector.



[2]

10



(a) Write down the co-ordinates of the point A.

(..... , ...) [1]

(b) C has co-ordinates (4, 6).
C is the midpoint of the line AB.

Find the co-ordinates of B.

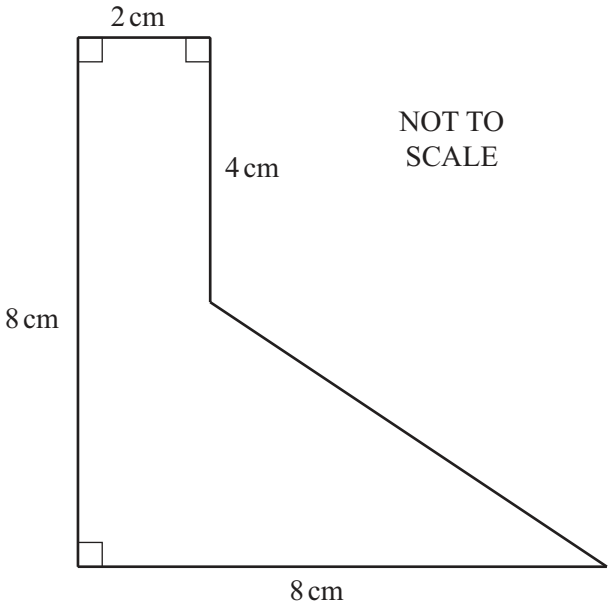
(..... , ...) [1]

11 A trader buys a carpet for \$640.
She sells it at a profit of 25%.

Calculate the selling price of the carpet.

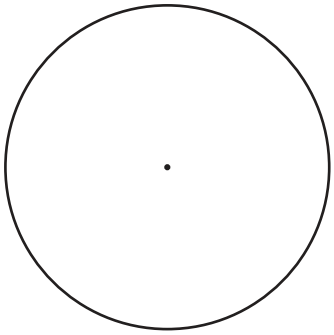
\$ ..... [3]

12 Find the area of this shape.



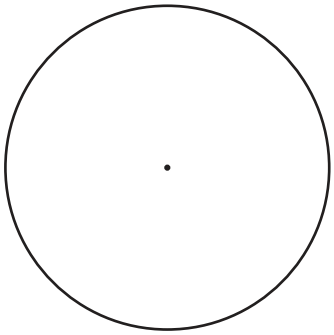
..... cm^2 [3]

13 **(a)** Shade a segment inside this circle.



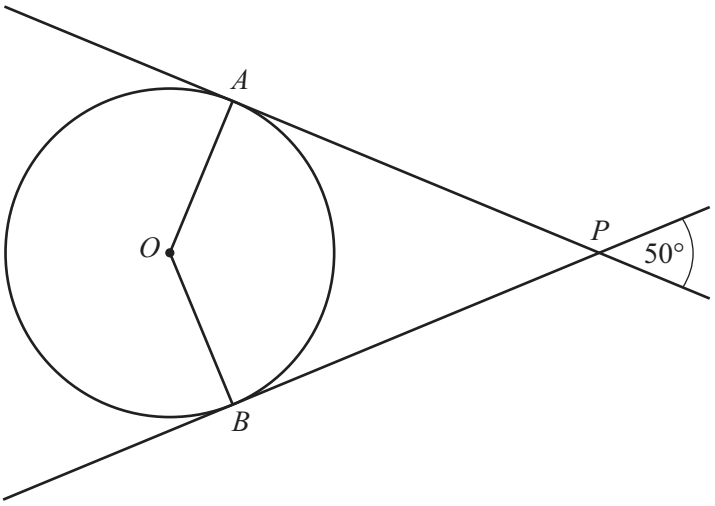
[1]

(b) Draw a radius inside this circle.



[1]

(c)



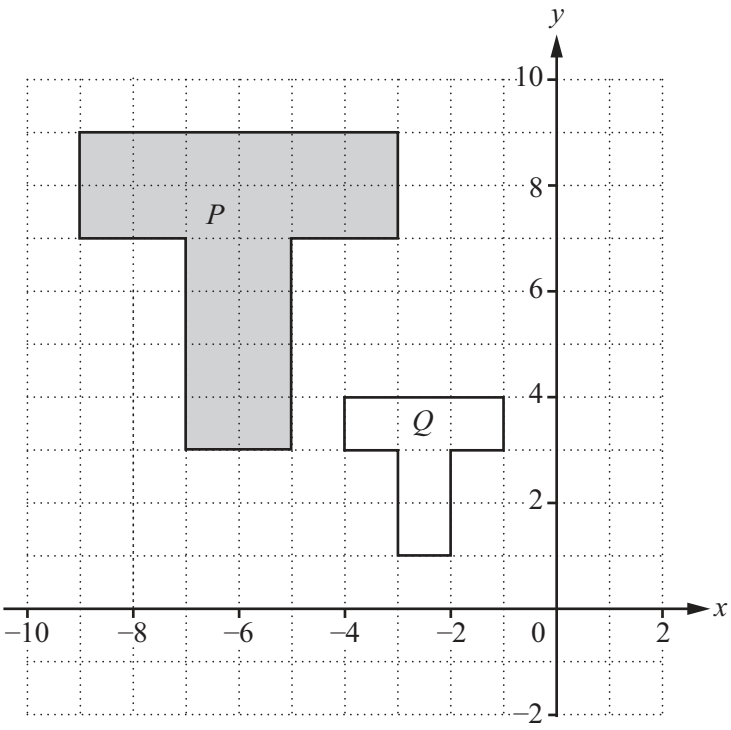
NOT TO SCALE

The diagram shows a circle, centre O.
AP and BP are tangents to the circle at A and B.

Find angle AOB.

Angle AOB = ... [3]

14

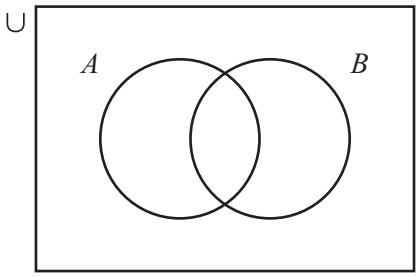


Describe fully the **single** transformation that maps shape P onto shape Q.

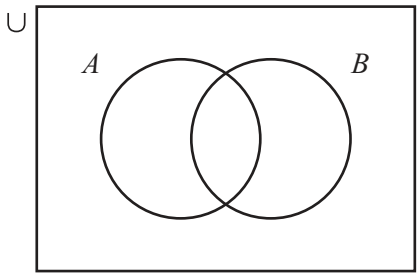
.....

..... [3]

15 On each Venn diagram, shade the region indicated.



$A \cap B$



$A \cup B'$

[2]

Questions 16 and 17 are printed on the next page.

16 Solve.

$3x - 4 \geqslant 8$

.....

[2]

17 Solve the simultaneous equations.

$6x + 4y = 34$
$3x - y = 14$

$x =$ .....

$y =$ .....

[3]

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