Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

* 0 2 1 0 4 4 2 2 8 3 *

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **May/June 2018**

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

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Answer **all** the questions.

1 3 6 12 15 18 36

From the list of numbers write down

(a) a common factor of 9 and 18,

..... [1]

(b) a common multiple of 6 and 12.

..... [1]

2 Work out $\frac{3}{10}$ of 120.

..... [1]

3 Write down the value of $\sqrt[3]{64}$.

..... [1]

4 Write down a prime number between 20 and 30.

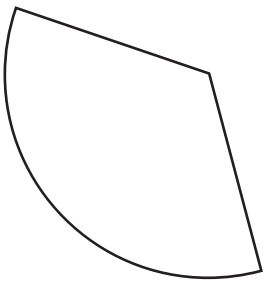
..... [1]

5 Insert one pair of brackets to make this calculation correct.

$$5 + 10 \times 3 - 1 = 25$$

[1]

6



Write down the number of lines of symmetry of this sector.

..... [1]

7 The table shows the number of students in each year group at a school.

	Boys	Girls	Total
Year 1	59	65	124
Year 2	64	72	136
Year 3	70	67	137
Year 4	63	65	128
Year 5	58	67	125
Total	314	336	650

Write down

(a) the number of boys in Year 4, ... [1]

(b) the total number of students in Year 2, ... [1]

(c) the year group in which there are more boys than girls. ..... [1]

8 Adele is collecting data about the people who live in Paris.

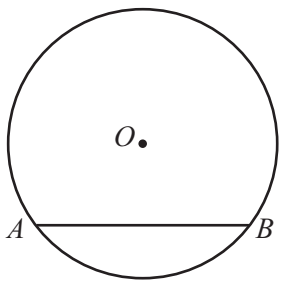
(a) Write down a type of discrete data that Adele could collect.

..... [1]

(b) Write down a type of continuous data that Adele could collect.

..... [1]

9



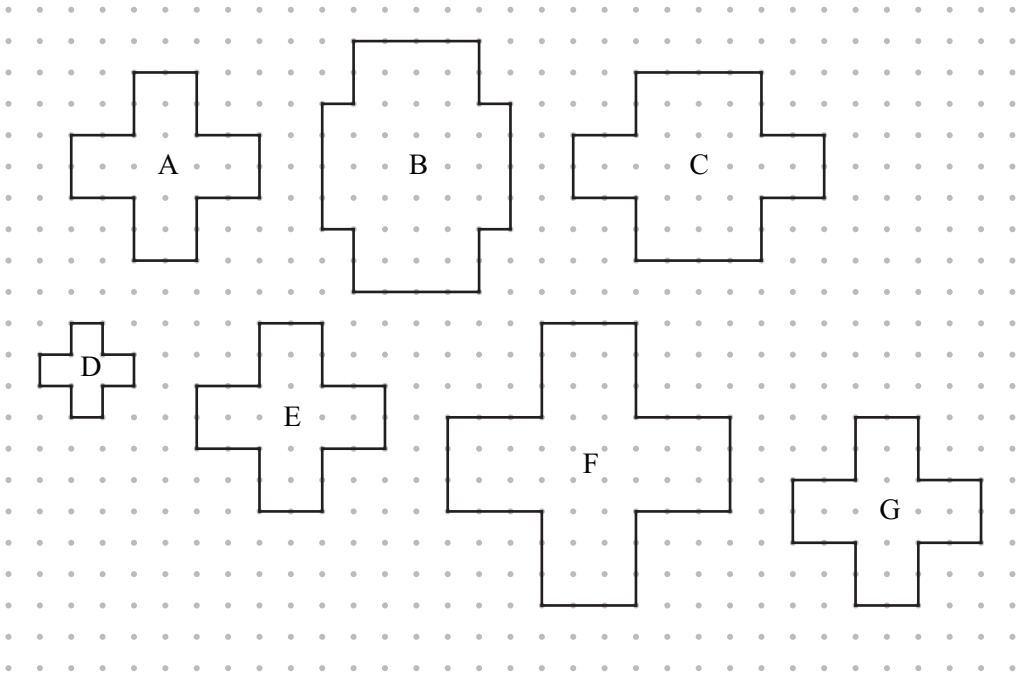
The diagram shows a circle, centre O, and a straight line AB.

Write down the mathematical name of the line AB.

..... [1]

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10



Write down the letters for all the shapes that are congruent.

..... [1]

11 Use one of the symbols >, < or = to make the following statement correct.

$\frac{7}{25}$ ..... $\frac{1}{5}$

[1]

12 Simplify.

$5e - 4f - e + 3f$

..... [2]

13 The table shows the favourite football team of each of 30 students.

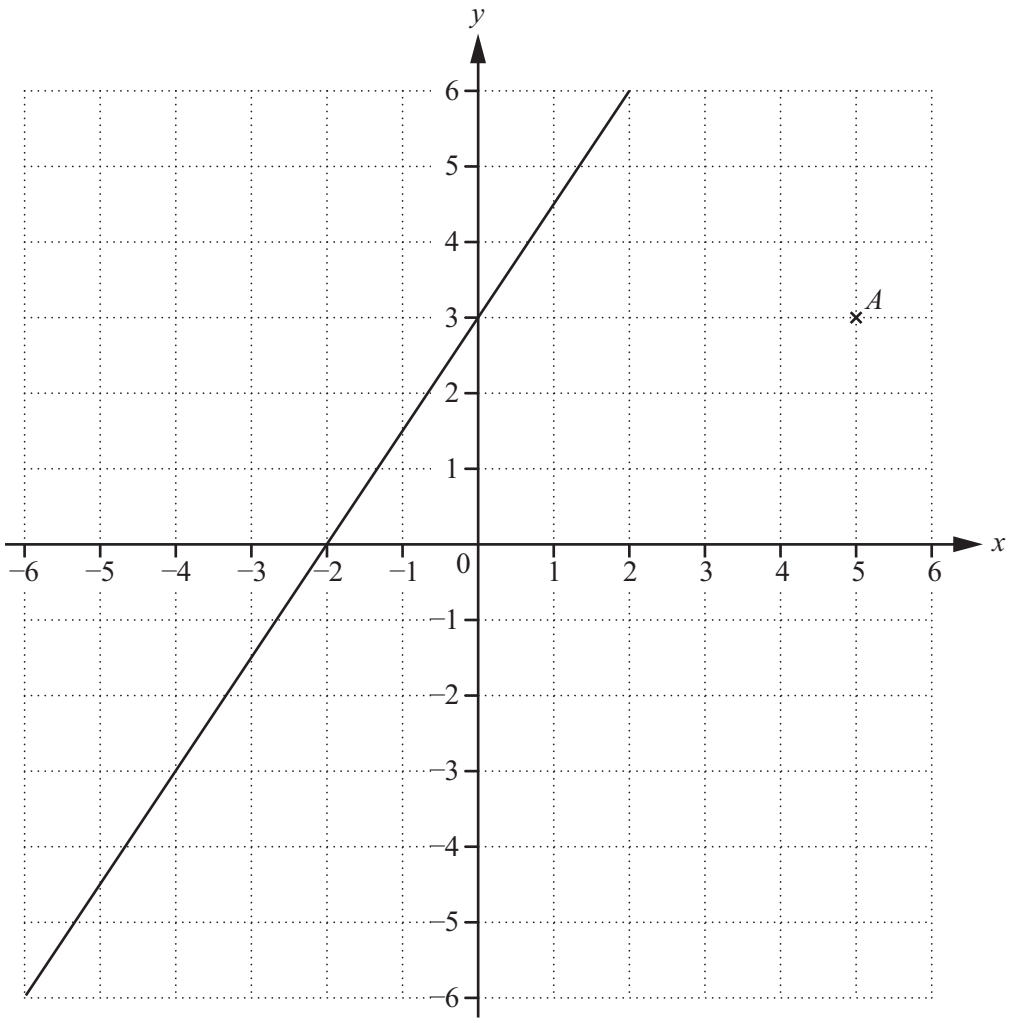
Favourite team	Chelsea	Liverpool	Middlesbrough	Preston	West Ham
Number of students	5	6	12	4	3

Paula draws a pie chart to show this information.

Work out the sector angle for Liverpool.

..... [2]

14



The diagram shows a point A and the line $y = \frac{3}{2}x + 3$.

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

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

(b) Plot and label the point B (–1, –3). [1]

(c) Draw the line $x = 4$. [1]

(d) Write down the co-ordinates of the point where the line $y = \frac{3}{2}x + 3$ crosses the x-axis.

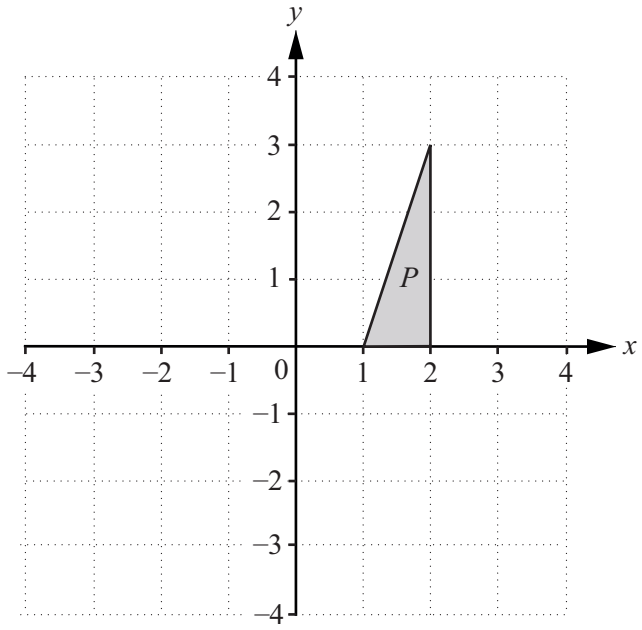
(.....,.....) [1]

(e) Write down the gradient of the line $y = \frac{3}{2}x + 3$.

..... [1]

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15



(a) Reflect triangle P in the y-axis. Label the image Q. [1]

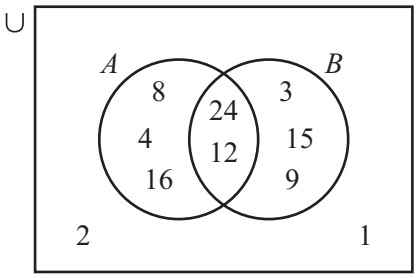
(b) Rotate triangle P through 90° clockwise about the origin. Label the image R. [2]

(c) Describe fully the **single** transformation that maps triangle Q onto triangle R.

.....

..... [2]

16



Write down the elements in $A \cap B'$.

{ ..... } [2]

17 Omar runs at an average speed of 12 km/h.

Find the time he will take to run 18 km.

..... hours [2]

Questions 18, 19 and 20 are printed on the next page.

18 $f(x) = 5\sqrt{x}$

Work out f(36).

..... [1]

19 **(a)** Solve the equation.

$$5x = 35$$

$x =$ ..... [1]

(b) Solve the equation.

$$5(y - 7) = 10$$

$y =$ ..... [2]

20 Solve the simultaneous equations.

$$x - 2y = 1$$
$$3x + y = 10$$

$x =$ .....

$y =$ ..... [3]

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