Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

2851231485

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **May/June 2020**

45 minutes

You must answer on the question paper.

You will need: Geometrical instruments

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- Calculators must **not** be used in this paper.
- You may use tracing paper.
- You must show all necessary working clearly and you will be given marks for correct methods even if your answer is incorrect.
- All answers should be given in their simplest form.

INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages. Blank pages are indicated.

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[Turn over

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.

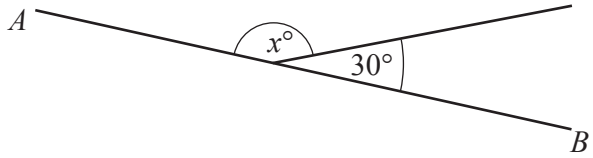
1 Write 73% as a fraction.

..... [1]

2 Write down all the factors of 11.

..... [1]

3



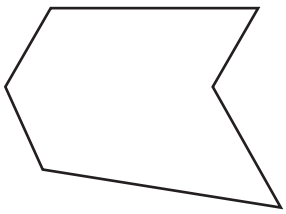
NOT TO SCALE

AB is a straight line.

Find the value of x.

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

4 **(a)**

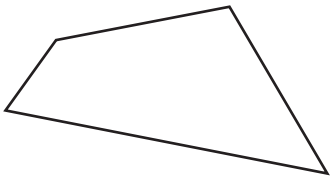


NOT TO SCALE

Write down the mathematical name of this polygon.

..... [1]

(b)

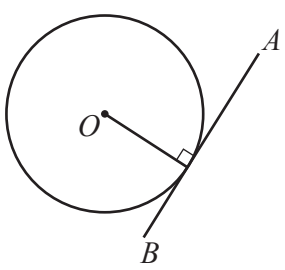


NOT TO SCALE

Write down the mathematical name of this polygon.

..... [1]

5



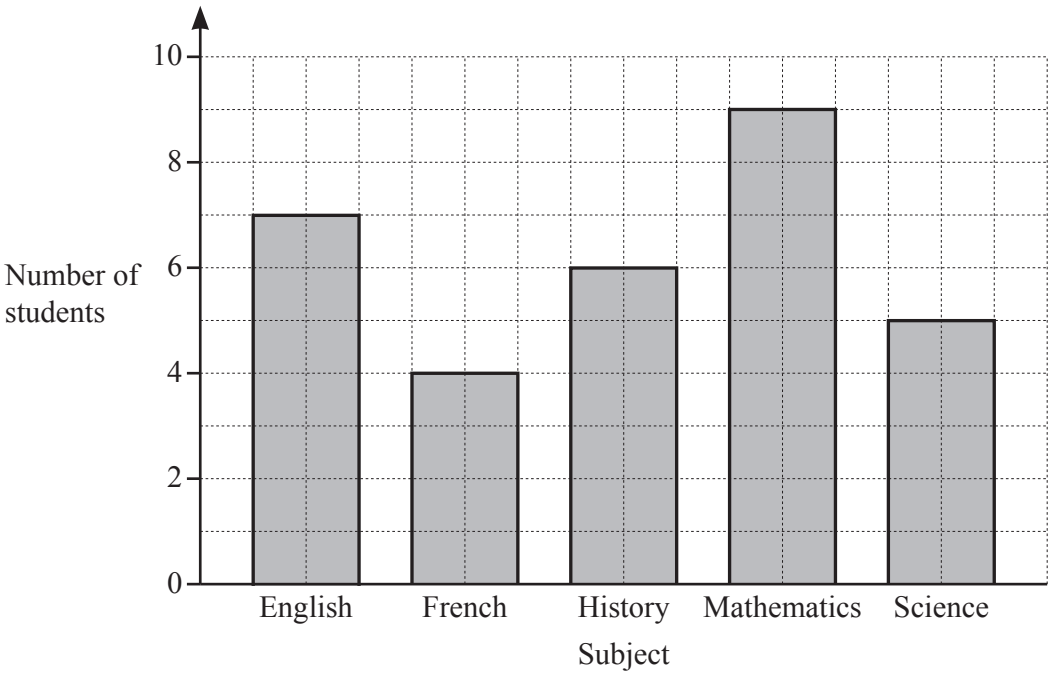
NOT TO SCALE

O is the centre of the circle.

Write down the mathematical name of the line *AB*.

..... [1]

6 The diagram shows the favourite subject of each student in a class.



Write down the number of students whose favourite subject is

(a) French,

..... [1]

(b) mathematics.

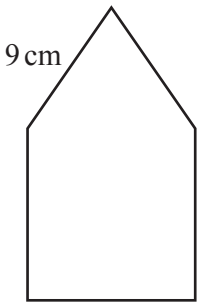
..... [1]

7 Work out.

$30 - 5 \times 7 + 1$

..... [1]

8



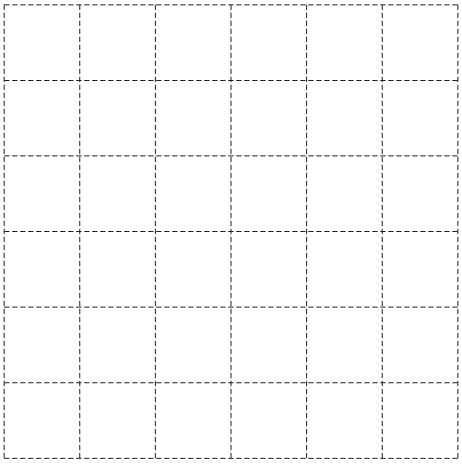
NOT TO SCALE

This shape is made from an equilateral triangle and a square.

Find the perimeter of this shape.

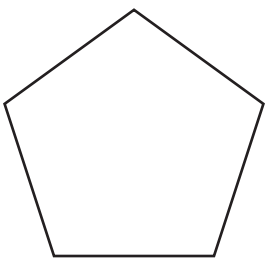
..... cm [2]

9 On the 1 cm^2 grid, draw a triangle with an area of 6 cm^2.



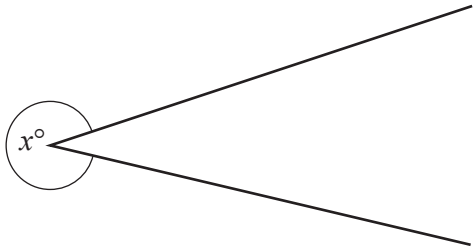
[1]

10 Draw all the lines of symmetry on this regular pentagon.



[2]

11



Find, by measuring, the angle marked x.

..... [1]

12 Change 4 m 25 cm into millimetres.

..... mm [1]

13 Simplify the ratio 10 : 15 .

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

14 Work out 2^5.

..... [1]

15 Solve the equation.

$$4x + 1 = 6$$

$x =$ ..... [2]

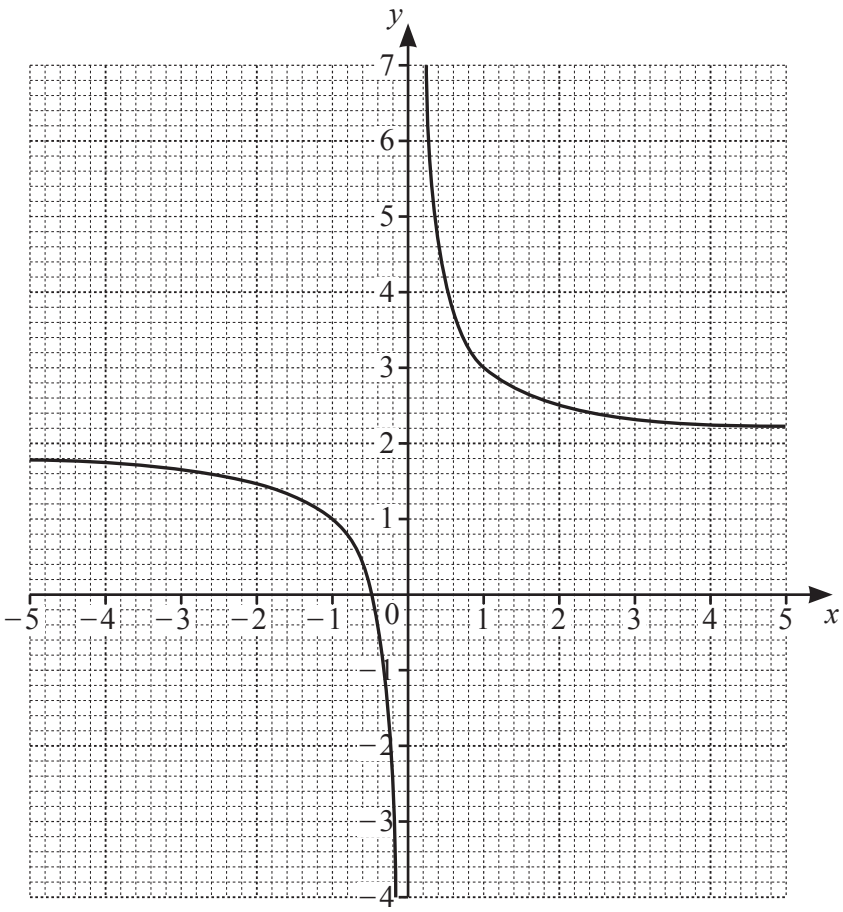
16 Find the coordinates of the mid-point of the line joining the point (0, 0) to the point (−2, 4).

(..... , ...) [2]

17 Write down the integers that satisfy the inequality $3 < n < 7$.

..... [1]

18 The diagram shows the graph of $y = f(x)$.



Draw the horizontal asymptote for the graph of $y = f(x)$. [1]

19 Apples are stored in boxes.
There are 100 apples in a box.
Two boxes are chosen at random and the apples are sorted into good and bad.

(a) Complete the table of results.

	Good	**Bad**	**Total**
Box 1		12	100
Box 2	95		100
Total	183		200

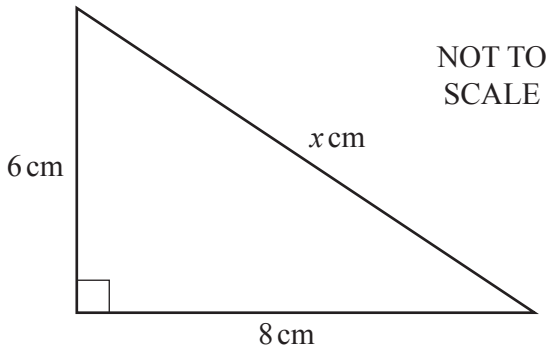
[2]

(b) One of these 200 apples is chosen at random.

Write down the probability that this apple is good.

..... [1]

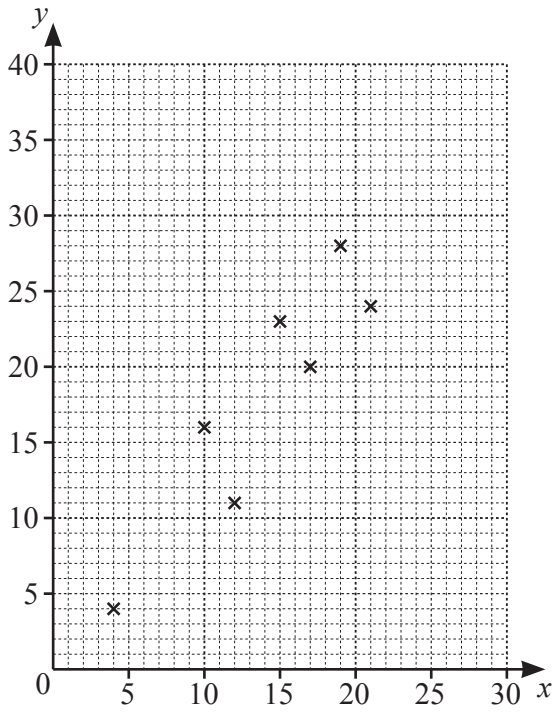
20



Work out the value of x.

$x =$ ..... [2]

21 The scatter diagram shows a correlation between x and y.



(a) Write down the type of correlation shown in the scatter diagram.

..... [1]

(b) The mean point is (14, 18).

(i) Draw the line of best fit. [2]

(ii) Use your line of best fit to estimate the value of x when $y = 25$.

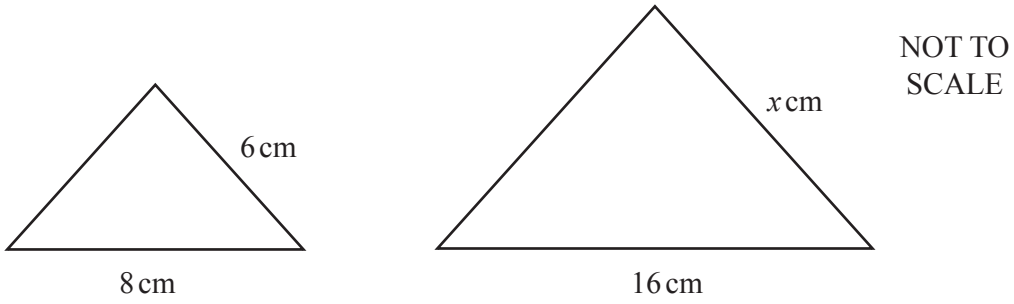
$x =$ ..... [1]

22 A sphere has a radius of 3 cm.

Find the surface area of the sphere.
Give your answer in terms of π.

..... cm^2 [2]

23



These triangles are similar.

Find the value of x.

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

24 Describe fully the **single** transformation that maps $y = x^2$ onto $y = x^2 + 4$.

..... [2]

25 Solve the simultaneous equations.

$$3x + y = 13$$
$$2x + y = 10$$

$x =$ .....

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

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