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.

DC (KN/SW) 188562/1
© UCLES 2020

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

© UCLES 2020

Answer **all** the questions.

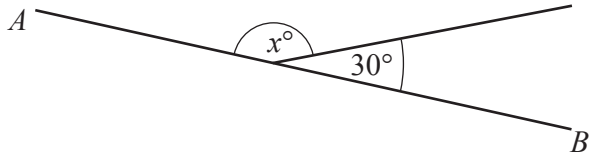
1 Write 73% as a fraction.

..... [1]

2 Write down all the factors of 11.

..... [1]

3



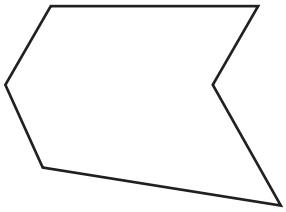
NOT TO SCALE

AB is a straight line.

Find the value of x.

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

4 **(a)**

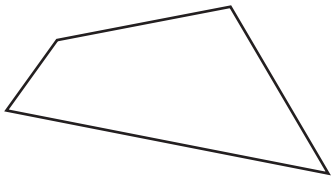


NOT TO SCALE

Write down the mathematical name of this polygon.

..... [1]

(b)

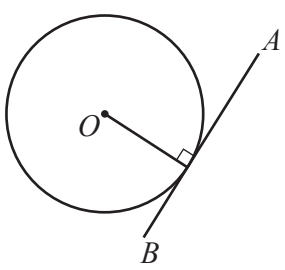


NOT TO SCALE

Write down the mathematical name of this polygon.

..... [1]

5



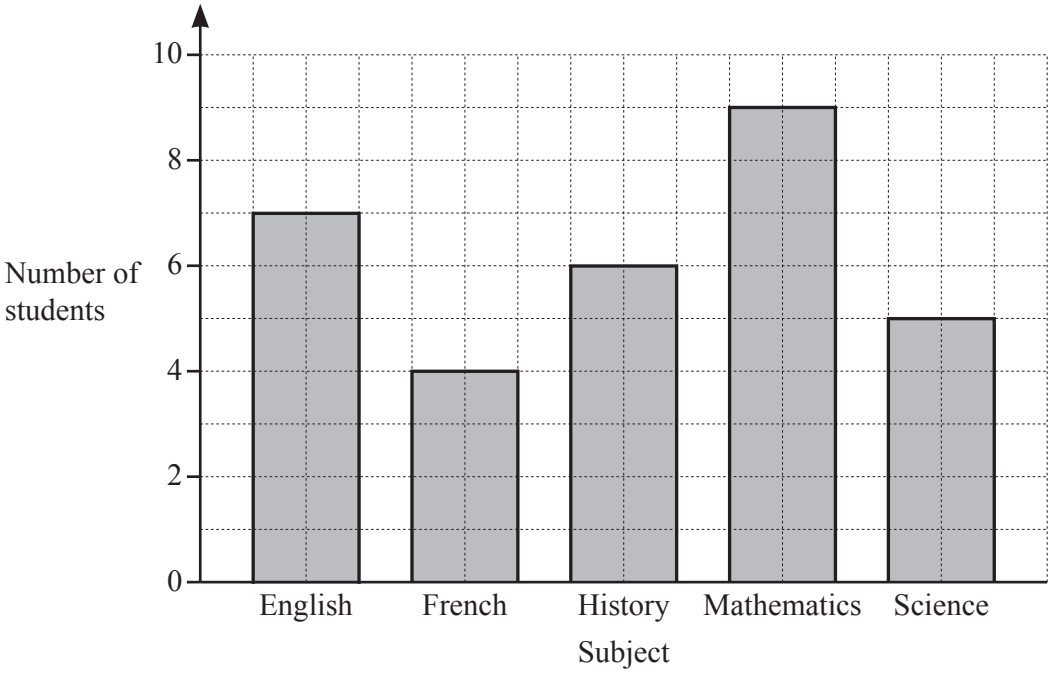
NOT TO SCALE

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.

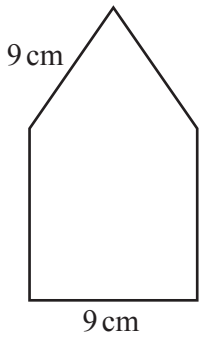
..... [1]

7 Work out.

$$30 - 5 \times 7 + 1$$

..... [1]

8



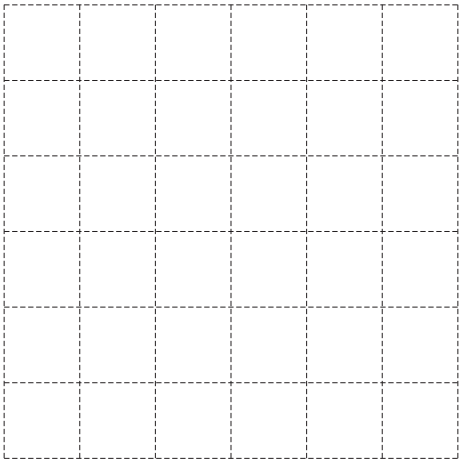
NOT TO SCALE

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

Find the perimeter of this shape.

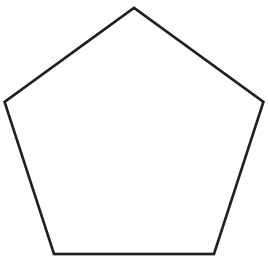
..... cm [2]

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



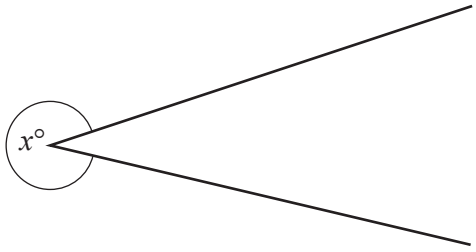
[1]

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]

© UCLES 2020

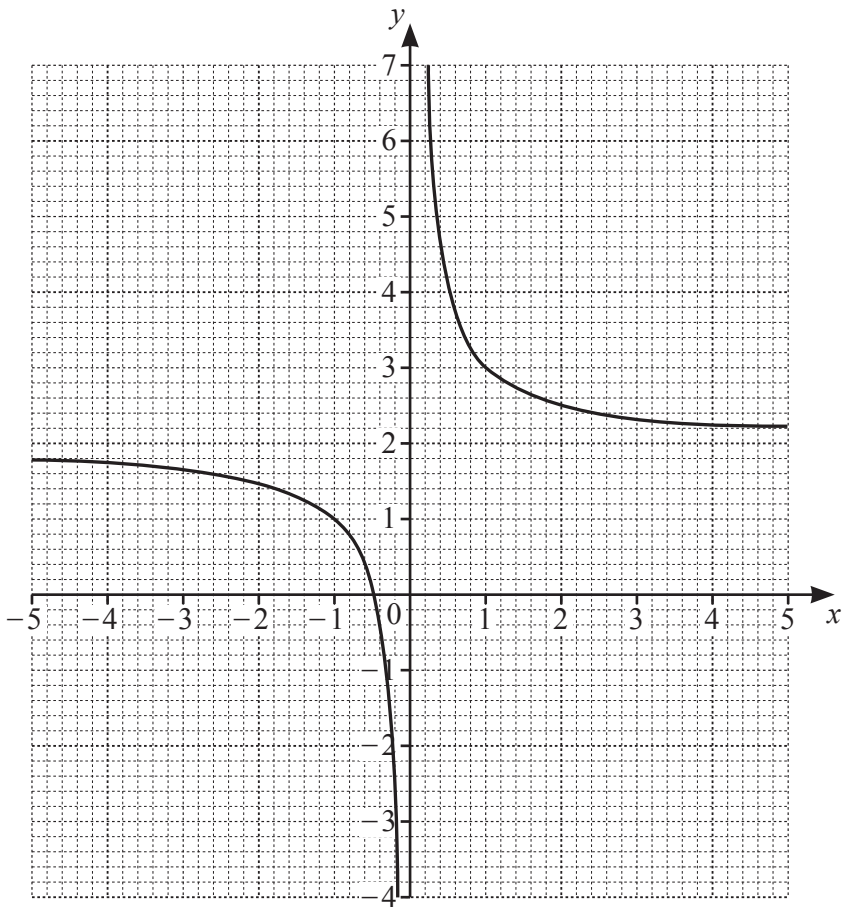
16 Find the coordinates of the mid-point of the line joining the point (0, 0) to the point (−2, 4).

(..... , ...) [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

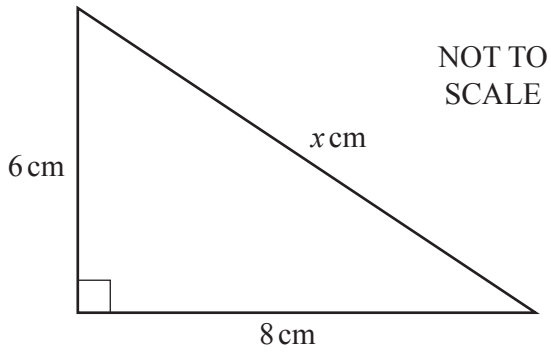
[2]

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

Write down the probability that this apple is good.

..... [1]

20

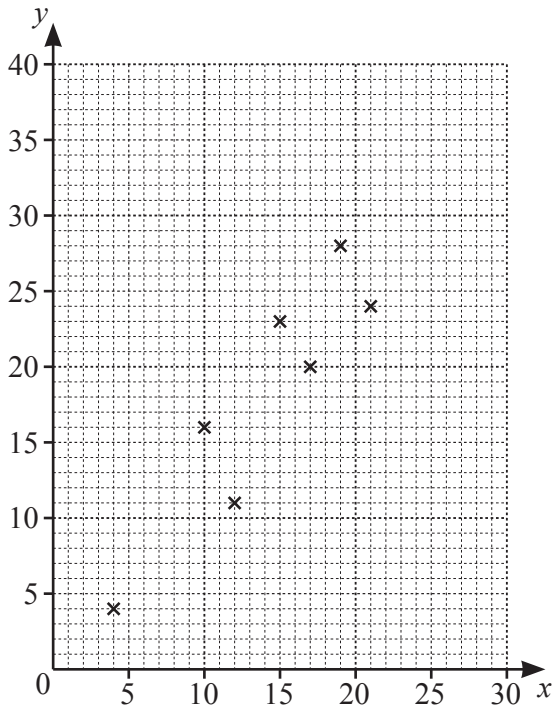


Work out the value of x.

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

© UCLES 2020

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 $y = 25$.

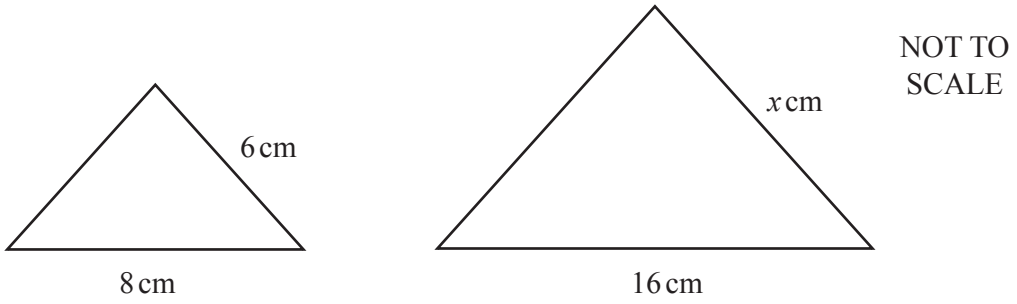
$x =$ ..... [1]

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]

BLANK PAGE

© UCLES 2020

BLANK 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 (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.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

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

© UCLES 2020