Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

6276546679

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/12**

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 (PQ/SW) 188561/2
© 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 **(a)** Write the number 30 000 010 in words.

..... [1]

(b) Write the number thirty thousand and one hundred in figures.

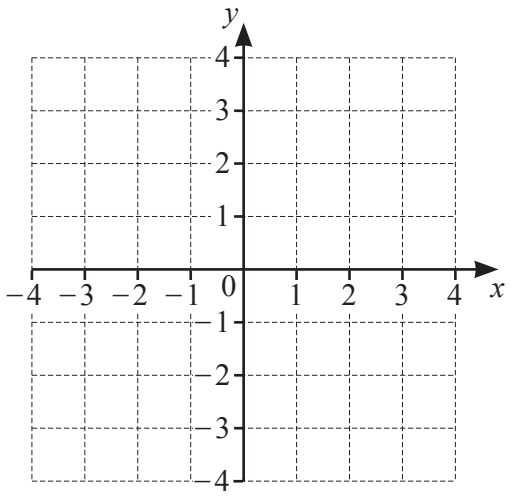
..... [1]

2 Work out.

$16 - 5 + 2$

..... [1]

3



On the grid, plot the point (3, 2). [1]

4 cm cm^2 cm^3 m m^2 m^3 km km^2 km^3

From the list, write down the best unit to use to measure the floor area of a school.

..... [1]

5 Complete the statement with $<$, $=$ or $>$.

200 ..... 80 [1]

6 **(a)** These are the first four terms of a sequence.

2 5 8 11

Write down the next term in this sequence.

..... [1]

(b) These are the first five terms of another sequence

0.1 1 10 100 1000

Write down the rule for continuing this sequence.

..... [1]

7 Write 0.16 as a fraction in its simplest form.

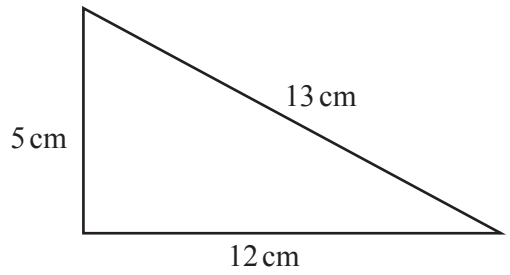
..... [2]

8 Change 6.3 kilograms into grams.

..... g [1]

© UCLES 2020

9



NOT TO SCALE

Work out the perimeter of this triangle.

..... cm [1]

10 Work out 0.1×0.3.

..... [1]

11 This table shows the distances, in kilometres, between four cities in the USA.

Boston			
1580	Chicago		
4800	3243	Los Angeles	
2414	2218	4394	Miami

(a) Write down the distance between Boston and Miami.

..... km [1]

(b) Write down the name of the nearest city to Chicago.

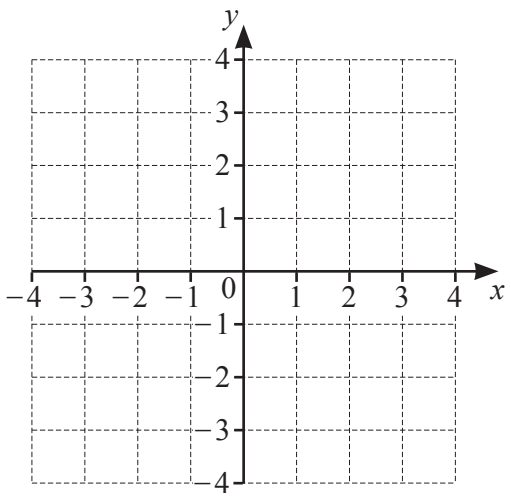
..... [1]

12 The probability that a light bulb is faulty is 5%.

Find the probability that a light bulb is not faulty.

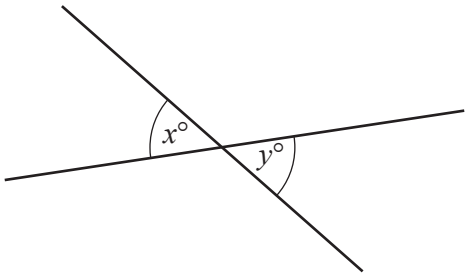
..... [1]

13



On the grid, draw the line $x = 2$. [1]

14



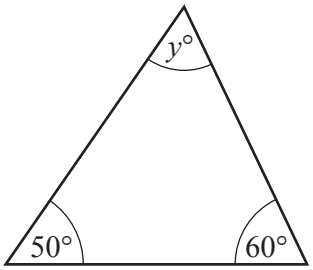
NOT TO SCALE

The diagram shows two straight lines.

Complete the statement.

The value of x is equal to the value of y because they are ..... angles. [1]

15



NOT TO SCALE

Find the value of y.

$y =$ ..... [1]

© UCLES 2020

16 Carlo drives 150 km in 2 hours.

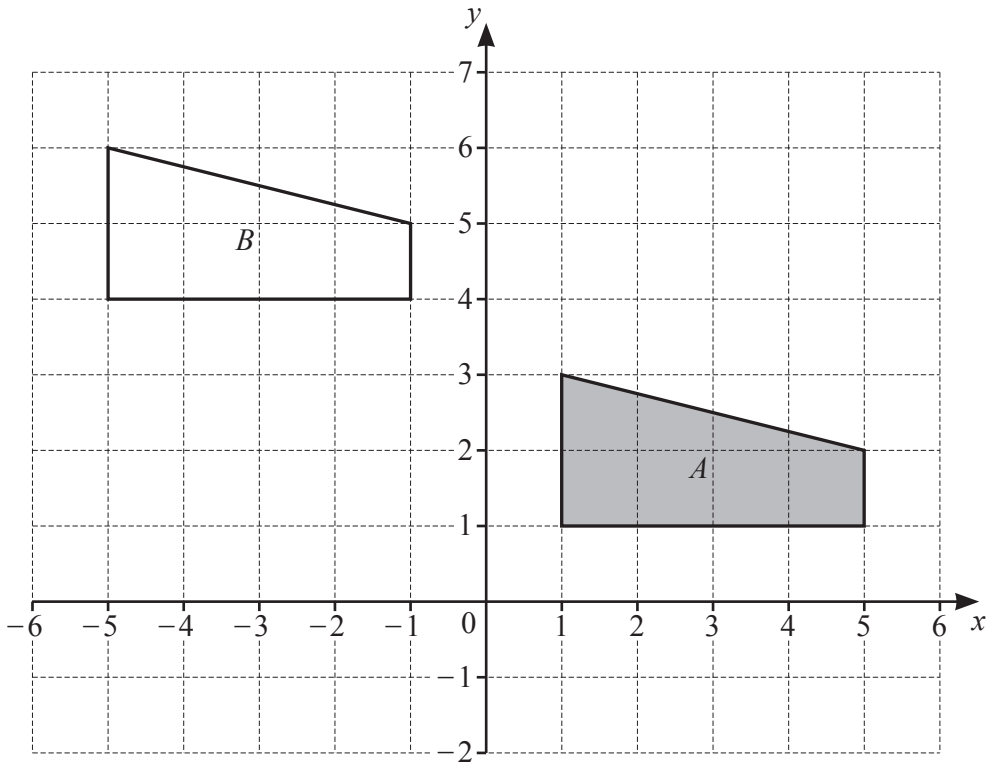
Work out his average speed.

..... km/h [1]

17 Solve $16 - 2x = 4 - 5x$.

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

18



Describe fully the **single** transformation that maps shape *A* onto shape *B*.

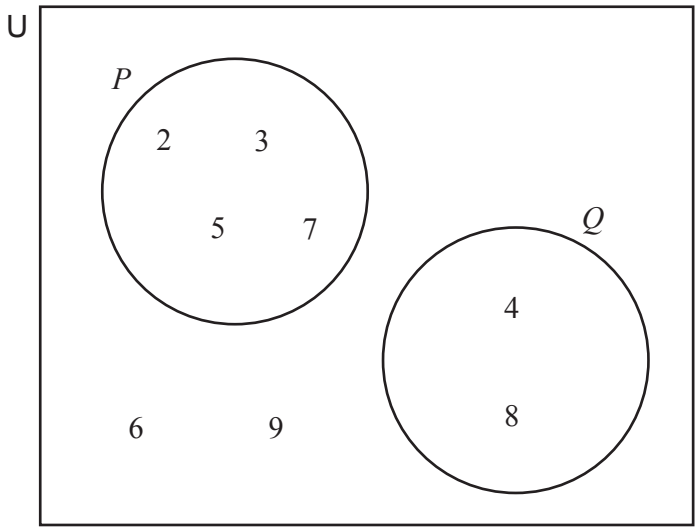
.....

..... [2]

19 Work out the size of one exterior angle of a regular hexagon.

..... [2]

20



Write down

(a) the set P',

{ ..... } [1]

(b) the set $P \cup Q$,

{ ..... } [1]

(c) $n(Q)$.

..... [1]

21 A is the point $(-3, 8)$ and B is the point $(5, 2)$.

Find the coordinates of the mid-point of AB.

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

22 Find the gradient of the line with equation $y = 8 - 4x$.

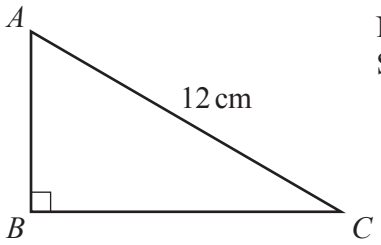
..... [1]

23 The height of a triangle is 8 cm and its area is 40 cm^2.

Find the length of the base.

..... cm [2]

24



NOT TO SCALE

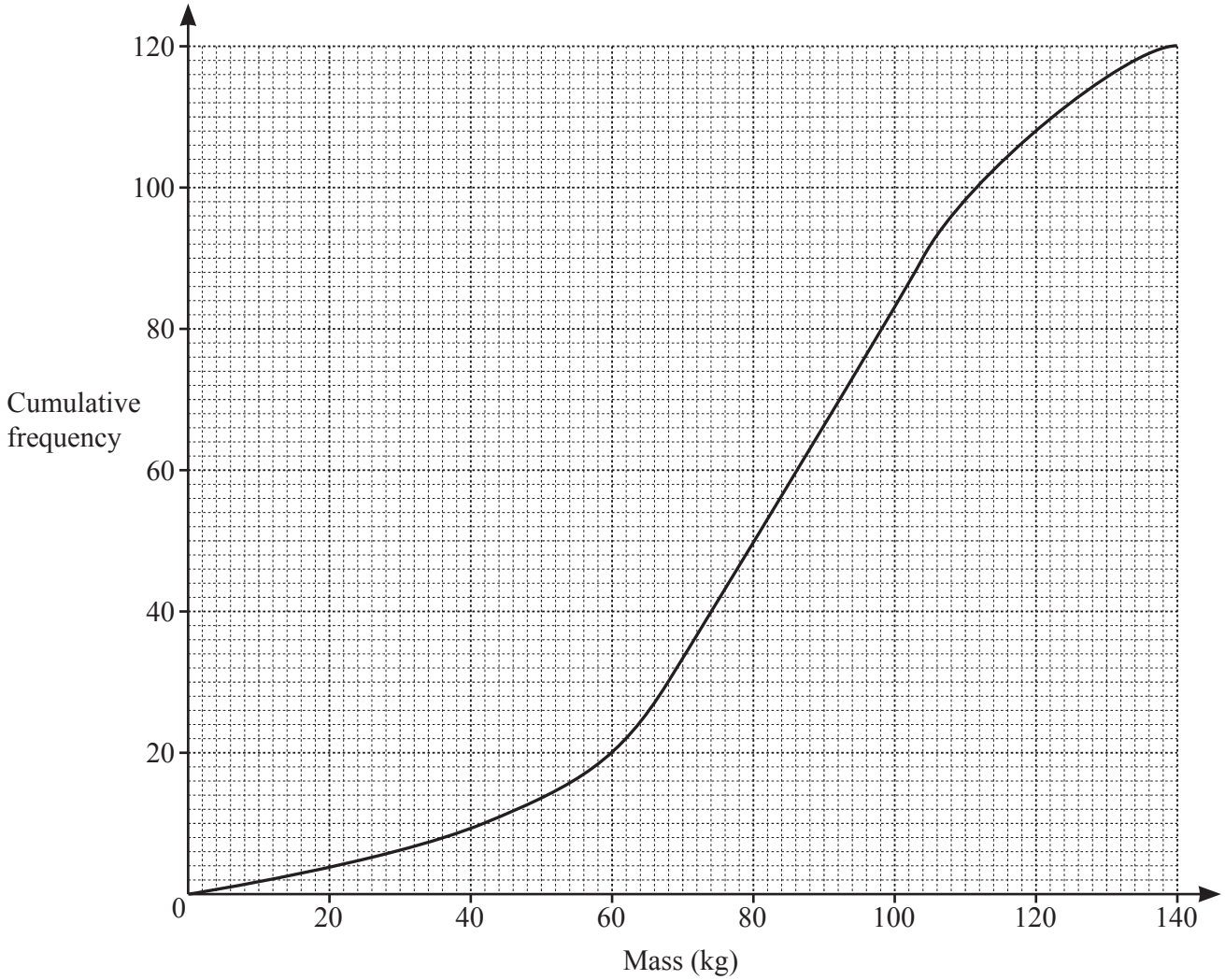
The diagram shows a right-angled triangle ABC with $AC = 12$ cm.

$\sin C = 0.6$ $\cos C = 0.8$ $\tan C = 0.75$

Find the length of AB.

..... cm [2]

25 This cumulative frequency diagram shows the mass, in kilograms, of each of 120 animals.



Use the diagram to find

(a) the median,

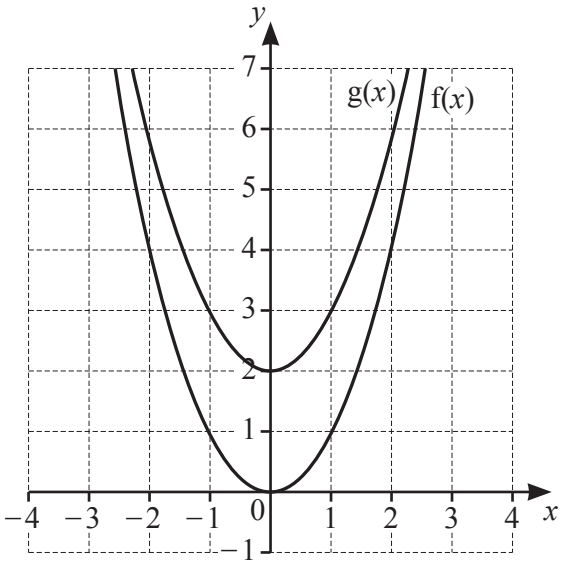
..... kg [1]

(b) the inter-quartile range.

..... kg [2]

© UCLES 2020

26



The diagram shows the graphs of $y = f(x)$ and $y = g(x)$.
The graph of $y = g(x)$ is a translation of the graph of $y = f(x)$.

Write down the function $g(x)$ in terms of $f(x)$.

$g(x) =$ ..... [1]

© 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