Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

5121911345

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/11**

Paper 1 (Core) **October/November 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 **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 2 4 8 16 32 48 64

From the list of numbers write down

(a) the square of 4,

..... [1]

(b) the square root of 64,

..... [1]

(c) the cube of 2,

..... [1]

(d) the lowest common multiple (LCM) of 16 and 32.

..... [1]

2 Work out.

(a) $(7 - 3) \times 5$

..... [1]

(b) $9 - 4 \times 2$

..... [1]

3 **(a)** Write down the next term in the following sequence.

7, 11, 15, 19, 23, …

..... [1]

(b) Write down the rule for continuing the following sequence.

3, 8, 13, 18, 23, …

..... [1]

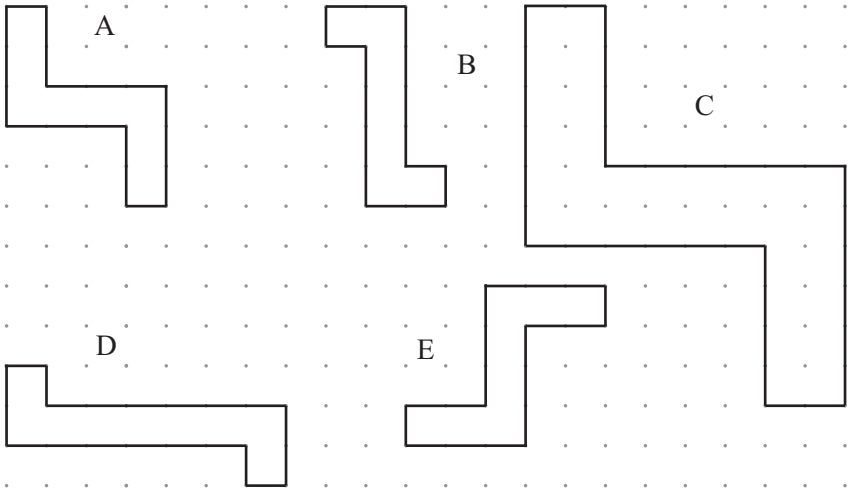
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4 Work out $3^0 \times 4^{-2}$.

Give your answer as a fraction.

..... [2]

5



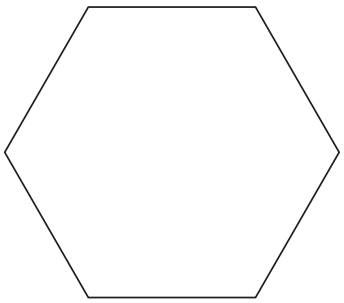
(a) Write down the letters of two congruent shapes.

..... and ..... [1]

(b) Write down the letters of two shapes which are similar but not congruent.

..... and ..... [1]

6 Draw all the lines of symmetry on this regular hexagon.



[2]

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7 When $f(x) = \frac{6}{x}$, find

(a) f(2),

..... [1]

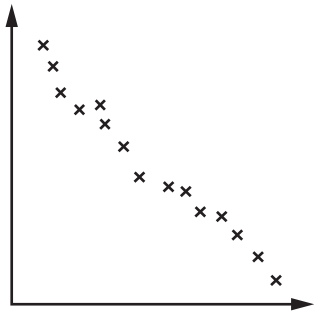
(b) f(–2),

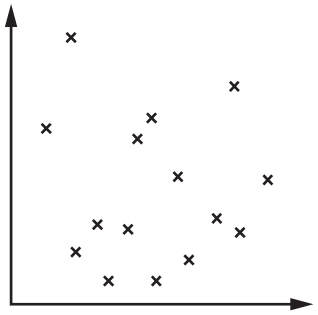
..... [1]

(c) $f\left(\frac{1}{2}\right)$.

..... [1]

8 What type of correlation is shown in each scatter diagram?





.... [2]

9 $\mathsf{U} = \{1, 2, 3, 4, 5, 6\}$ $A = \{2, 4, 6\}$ $B = \{2, 3, 5, 6\}$ $C = \{2, 4\}$

Complete the following.

(a) $A \cap B$ = { ..... } [1]

(b) B' = { ..... } [1]

(c) $B \cup C$ = { ..... } [1]

(d) $n(B \cup C)$ = ... [1]

10 Find the smallest integer value, x, such that

(a) $x > -3$, ... [1]

(b) $2x > 16$.

..... [1]

11 **(a)** Find the value of $6x + 7y$ when $x = 3$ and $y = -5$.

..... [2]

(b) Write down an expression, in terms of x and y, for the total cost of x apples at 70 cents each and y pears at 50 cents each.

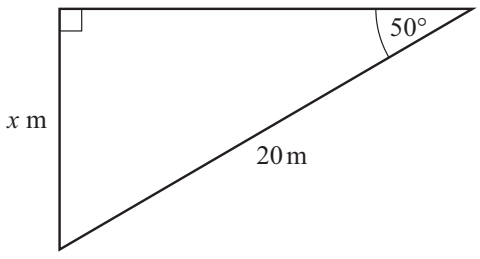
..... cents [2]

(c) A line has equation $3x + 4y = 12$.

Write the equation of this line in the form $y = mx + c$.

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

12



NOT TO SCALE

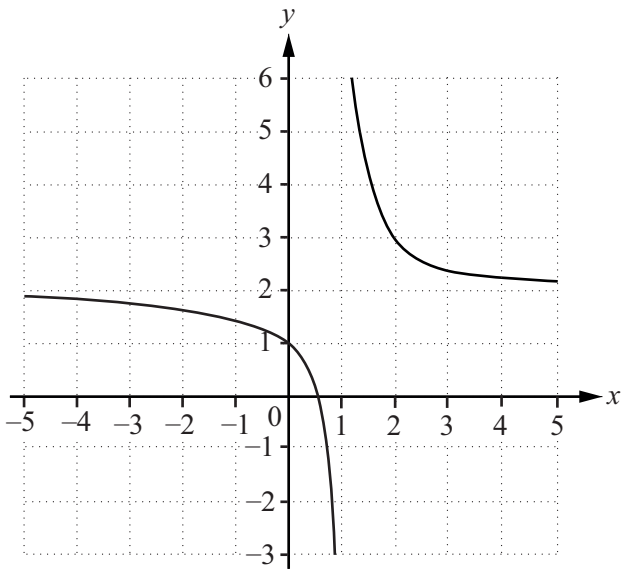
sin 50° = 0.766 cos 50° = 0.643 tan 50° = 1.192

Use the information given to work out the value of x.

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

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13

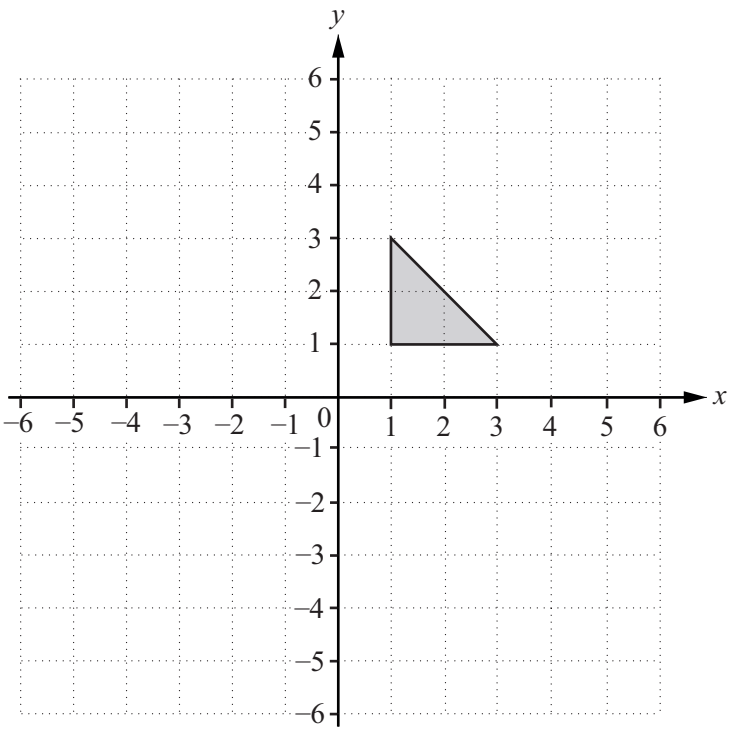


Write down the equations of the two asymptotes of the graph.

.....

..... [2]

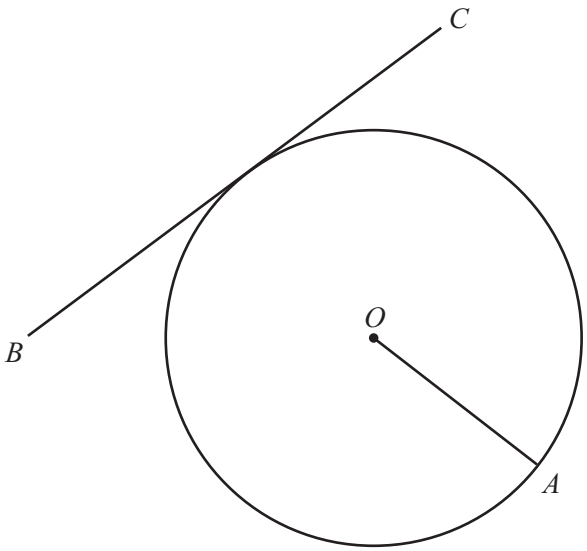
14



On the grid, enlarge the shaded triangle with scale factor 2, centre (3, 4). [2]

Question 15 is printed on the next page.

15 (a)



NOT TO SCALE

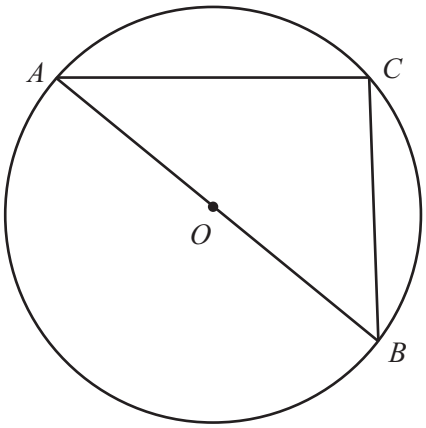
The diagram shows a circle centre O.

Write down the mathematical word that describes the line

(i) OA, ... [1]

(ii) BC. ..... [1]

(b)



NOT TO SCALE

AB is a diameter of a circle centre O.

Write down the size of angle ACB.

Angle ACB = ... [1]

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