Cambridge IGCSE

Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME	
CENTRE NUMBER	
CANDIDATE NUMBER	

0717706250

MATHEMATICS **0580/11**

Paper 1 (Core) **May/June 2019**

1 hour

Candidates answer on the Question Paper.

Additional Materials: Electronic calculator
Tracing paper (optional)
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.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.
If working is needed for any question it must be shown below that question.
Electronic calculators should be used.
If the degree of accuracy is not specified in the question, and if the answer is not exact, give the answer to three significant figures. Give answers in degrees to one decimal place.
For π, use either your calculator value or 3.142.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.
The total of the marks for this paper is 56.

This document consists of **11** printed pages and **1** blank page.

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[Turn over

1 Write $\frac{3}{4}$ as a decimal.

..... [1]

2 Work out \$1.20 as a percentage of \$16.

.....% [1]

3 Factorise $5y - 6py$.

..... [1]

4 A bag contains green balls and red balls only.
A ball is taken at random from the bag.
The probability of taking a green ball is 0.38 .

Write down the probability of taking

(a) a red ball,

..... [1]

(b) a blue ball.

..... [1]

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5 **(a)** On Monday the temperature at midday is 4 °C and the temperature at midnight is −3 °C.

Work out the difference between these two temperatures.

..... °C [1]

(b) On Wednesday the temperature at midday is −1 °C.
By 7 pm the temperature has fallen by 4 °C.

Work out the temperature at 7 pm.

..... °C [1]

6 The volume of a cuboid is 180 cm^3.
The base is a square of side length 6 cm.

Calculate the height of this cuboid.

..... cm [2]

7 Write the following numbers in standard form.

(a) 640 000

..... [1]

(b) 0.0006

..... [1]

8 Work out.

(a) $\begin{pmatrix} 4 \\ -2 \end{pmatrix} - \begin{pmatrix} 1 \\ 5 \end{pmatrix}$

$\begin{pmatrix} \quad \\ \quad \end{pmatrix}$ [1]

(b) $6\begin{pmatrix} 3 \\ 0 \end{pmatrix}$

$\begin{pmatrix} \quad \\ \quad \end{pmatrix}$ [1]

9 Asif and Ben share \$2100 in the ratio Asif : Ben = 3 : 7.

Work out how much Asif receives.

\$ ..... [2]

10 The length of a truck, L metres, is 8.2 m, correct to 1 decimal place.

Complete this statement about the value of L.

..... $\leqslant L <$ ..... [2]

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11 Simplify.

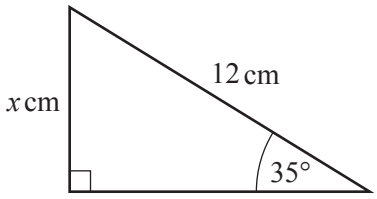
(a) $t^{21} \div t^7$

..... [1]

(b) $(u^5)^5$

..... [1]

12



NOT TO SCALE

The diagram shows a right-angled triangle.

Calculate the value of x.

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

13
$$p = \frac{1.6 + 9.6^2}{5.9 - 4.3}$$

(a) By writing each number correct to 1 significant figure, work out an estimate for p.
You must show all your working.

..... [2]

(b) Calculate the exact value of p.

..... [1]

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14 27 28 29 30 31 32 33

From the list of numbers, write down

(a) a multiple of 7,

..... [1]

(b) a cube number,

..... [1]

(c) a prime number.

..... [1]

15 **Without using a calculator**, work out $\frac{5}{6}+\frac{2}{3}$.

You must show all your working and give your answer as a mixed number in its simplest form.

..... [3]

16 These are the first four terms of a sequence.

5 8 11 14

(a) Write down the next term.

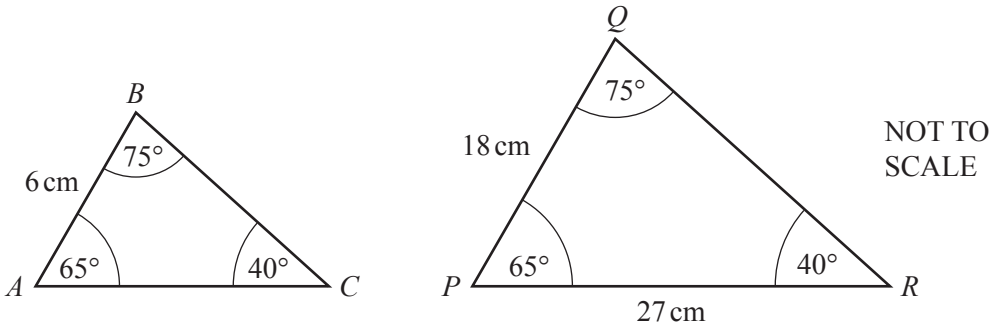
..... [1]

(b) Find an expression, in terms of n, for the nth term.

..... [2]

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17



(a) Explain why triangle *ABC* and triangle *PQR* are similar.

.....

..... [1]

(b) Find *AC*.

AC = ... cm [2]

18 A car travels at a constant speed of 20 m/s.

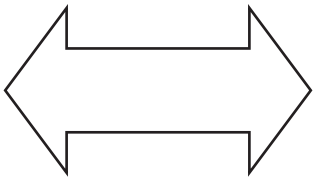
Work out the time it takes for the car to travel 10 km.
Give your answer in minutes and seconds.

..... minutes ..... seconds [3]

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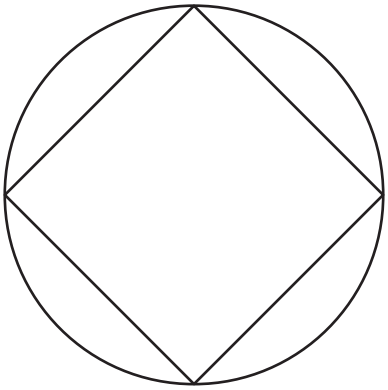
19 **(a)** On each shape, draw all the lines of symmetry.

(i)



[1]

(ii)



[2]

(b) Write down the name of a quadrilateral that has

- rotational symmetry of order 2

and

- exactly two lines of symmetry.

..... [1]

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20 **(a)** Change 3670 centimetres to metres.

.....m [1]

(b) The scale drawing shows the positions of town *S* and town *T*.
The scale is 1 centimetre represents 15 kilometres.





Scale: 1 cm to 15 km

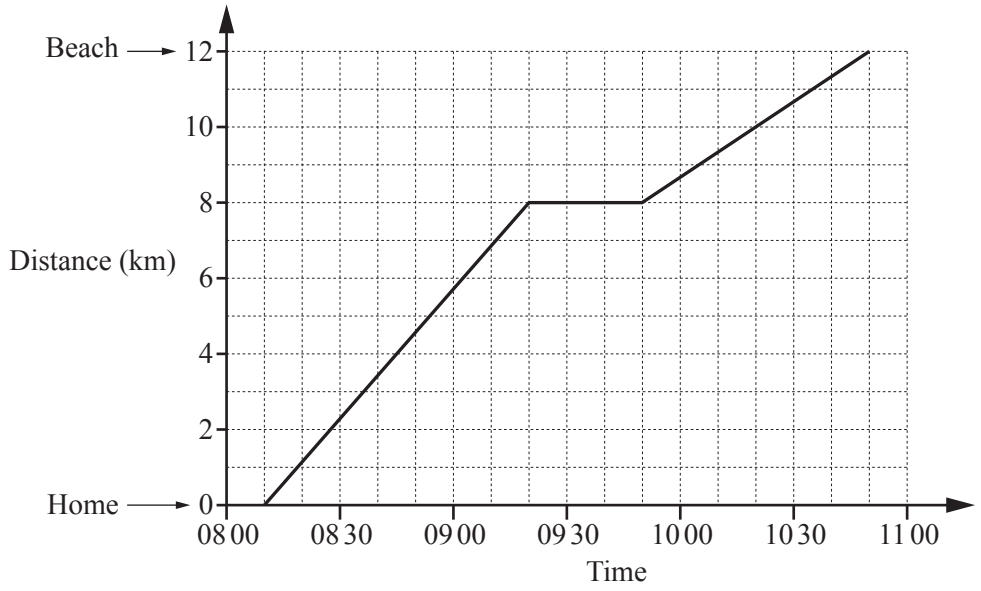
(i) Find the actual distance between these two towns.

.....km [2]

(ii) Measure the bearing of town *T* from town *S*.

..... [1]

21 The travel graph shows Michael's journey from his home to the beach.



(a) At what time did he start his journey?

..... [1]

(b) On the journey he stopped for a rest.

(i) Find the distance he was from home when he stopped for a rest.

.....km [1]

(ii) For how many minutes did he stop?

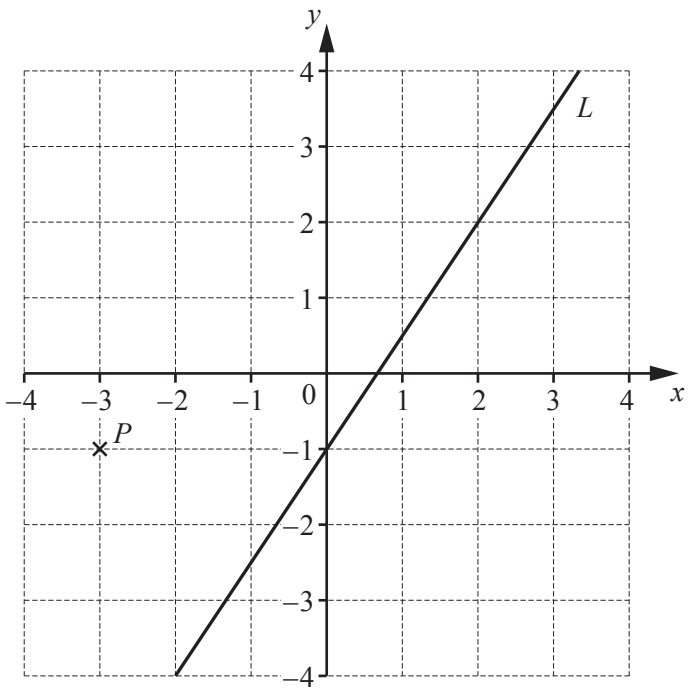
.....min [1]

(c) Explain how the graph shows that Michael travelled faster before he stopped than after he stopped.

..... [1]

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22 The diagram shows a point P and a line L.



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

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

(b) Find the gradient of line L.

..... [2]

(c) Write down the equation of line L in the form $y = mx + c$.

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

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