Cambridge IGCSE

Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

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.

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

View solution

..... [1]

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

View solution

.....% [1]

3 Factorise $5y - 6py$.

View solution

..... [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,

View solution

..... [1]

(b) a blue ball.

View solution

..... [1]

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

View solution

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.

View solution

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.

View solution

Calculate the height of this cuboid.

..... cm [2]

7 Write the following numbers in standard form.

(a) 640 000

View solution

..... [1]

(b) 0.0006

View solution

..... [1]

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8 Work out.

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

View solution

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

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

View solution

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

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

View solution

Work out how much Asif receives.

\$ ..... [2]

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

View solution

Complete this statement about the value of L.

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

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11 Simplify.

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

View solution

..... [1]

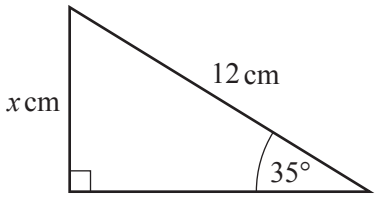
(b) $(u^5)^5$

View solution

..... [1]

12

View solution



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.

View solution

..... [2]

(b) Calculate the exact value of p.

View solution

..... [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,

View solution

..... [1]

(b) a cube number,

View solution

..... [1]

(c) a prime number.

View solution

..... [1]

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

View solution

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.

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..... [1]

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

View solution

..... [2]

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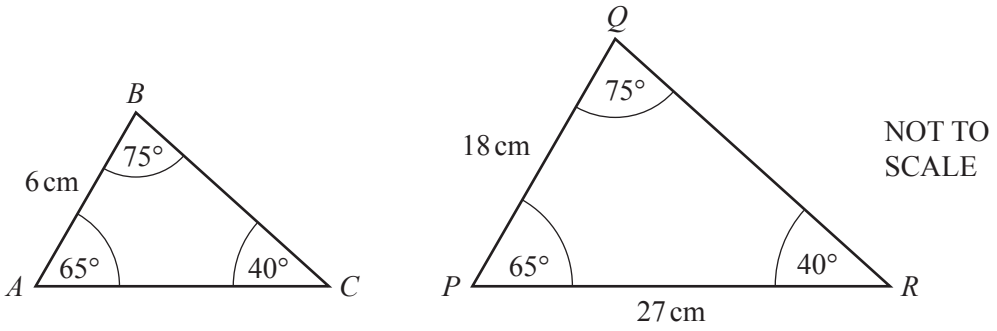
17



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

View solution

.....

..... [1]

(b) Find AC.

View solution

$AC =$ ..... cm [2]

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

View solution

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.

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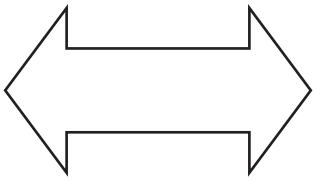
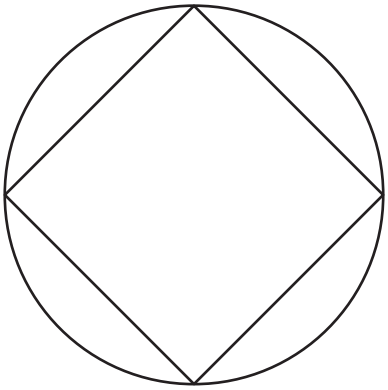
(i)



[1]

View solution

(ii)



[2]

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

View solution

- rotational symmetry of order 2

and

- exactly two lines of symmetry.

..... [1]

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

View solution

..... m [1]

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

View solution





Scale: 1 cm to 15 km

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

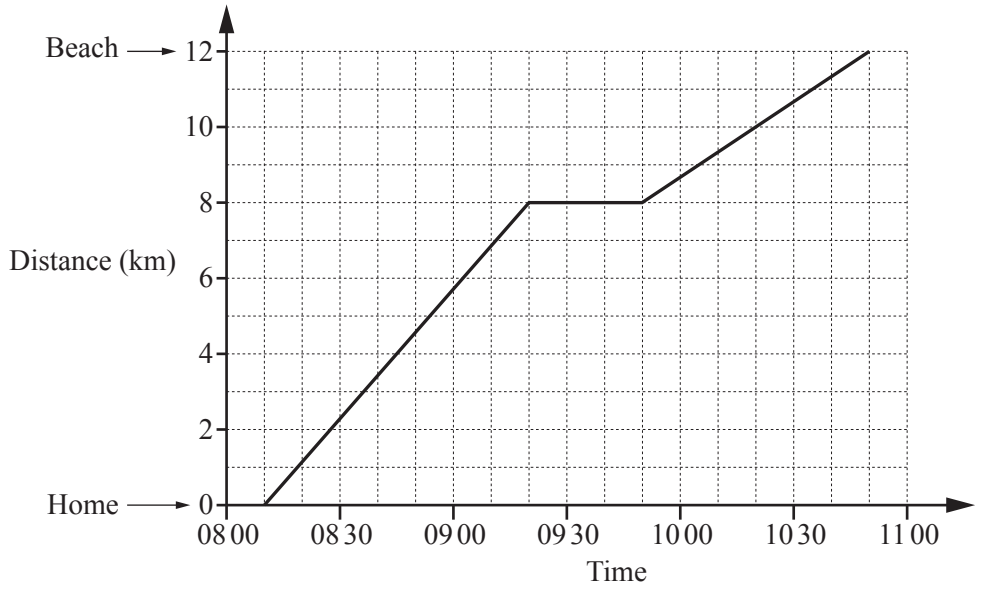
..... km [2]

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

View solution

..... [1]

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



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

View solution

..... [1]

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

View solution

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

.....km [1]

(ii) For how many minutes did he stop?

View solution

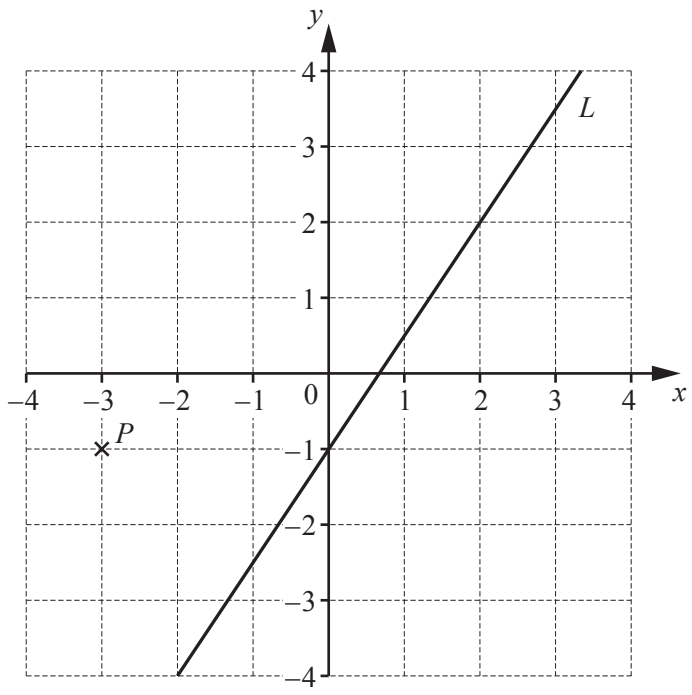
.....min [1]

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

View solution

..... [1]

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



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

View solution

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

(b) Find the gradient of line L.

View solution

..... [2]

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

View solution

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

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