Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME	
CENTRE NUMBER	
CANDIDATE NUMBER	

MATHEMATICS **0580/13**

Paper 1 (Core) **October/November 2015**

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.

The syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

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

© UCLES 2015

CAMBRIDGE International Examinations

1 Write in figures the number six thousand and fifty four.

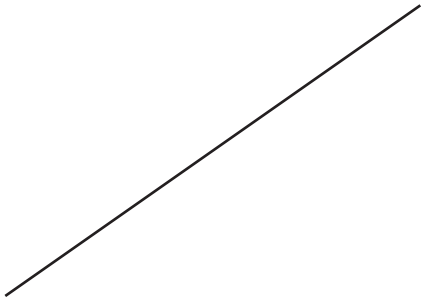
View solution

Answer ..... [1]

---

2 Measure the length of this line in centimetres.

View solution

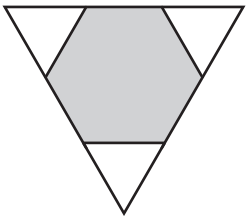


Answer ..... cm [1]

---

3 Write down the order of rotational symmetry of this shape.

View solution



Answer ..... [1]

---

4 Write 168.9 correct to 2 significant figures.

View solution

Answer ..... [1]

---

5 Calculate $\frac{2.07 - 1.89}{5.71 - 3.92}$.

View solution

Answer ..... [1]

© UCLES 2015

6 The probability that it will rain on any day is $\frac{1}{5}$.

Calculate an estimate of the number of days it will rain in a month with 30 days.

View solution

Answer ..... [1]

---

7 11 12 13 14 15 16

From the list of numbers, write down

(a) the factors of 60,

View solution

Answer(a) ..... [1]

(b) the prime numbers.

View solution

Answer(b) ..... [1]

---

8 These are the first four terms in a sequence.

21 17 13 9

(a) Write down the next number in this sequence.

View solution

Answer(a) ..... [1]

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

View solution

Answer(b) ..... [1]

---

9 Simplify.

$1 - 2u + u + 4$

View solution

Answer ..... [2]

© UCLES 2015

10 **(a)** At 9 am the temperature was –3°C.
At 1pm the temperature had risen by 5°C.

Work out the temperature at 1pm.

View solution

Answer(a) .....°C [1]

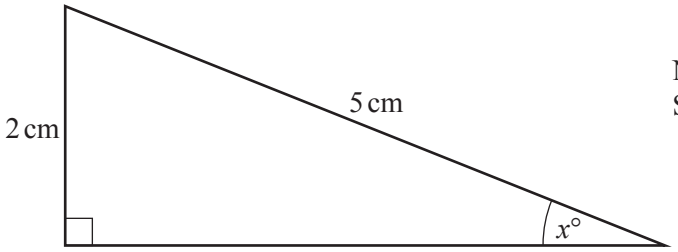
(b) Work out –7 – 2.

View solution

Answer(b) ..... [1]

11

View solution



NOT TO SCALE

Calculate the value of x.

Answer x = ... [2]

---

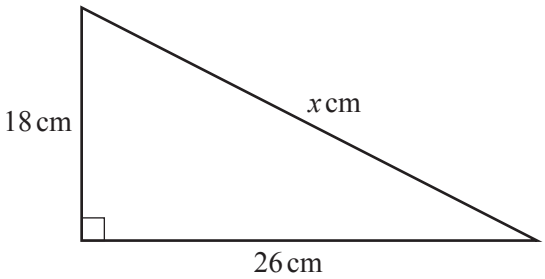
12 Write 72 as a product of its prime factors.

View solution

Answer ..... [2]

© UCLES 2015

13



NOT TO SCALE

View solution

Calculate the value of x.

Answer x = ... [2]

---

14 In this question use a ruler and compasses only and show all your construction arcs.

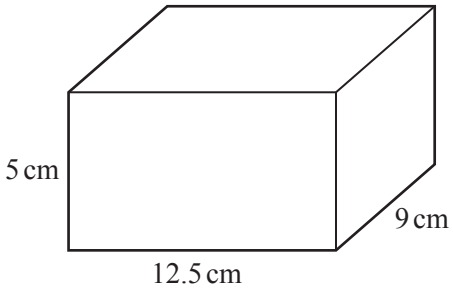
Using a scale of 1 centimetre to represent 50 metres, construct a triangle with sides 550 m, 450 m and 300 m. The 300 m side has been drawn for you.

View solution

[2]

© UCLES 2015

15



NOT TO SCALE

View solution

Calculate the volume of this cuboid.
Give the units of your answer.

Answer .... [3]

---

16 Work out $\frac{2}{3} + \frac{1}{6} - \frac{1}{4}$, giving your answer as a fraction in its lowest terms.

View solution

Do not use a calculator and show all the steps of your working.

Answer ..... [3]

---

17 **(a)** Multiply out.

$3(x + 7)$

View solution

Answer(a) ..... [1]

(b) Factorise completely.

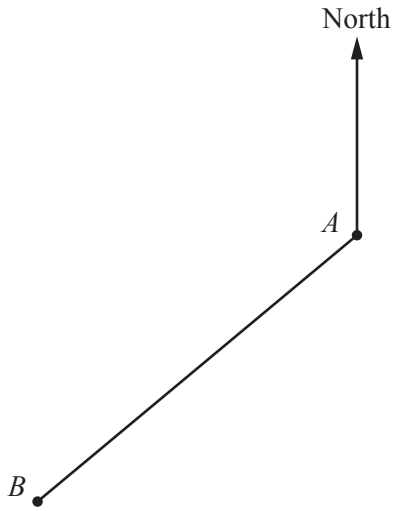
$2x - 4x^2$

View solution

Answer(b) ..... [2]

© UCLES 2015

18 This scale drawing shows the positions of two towns, A and B, on a map.



(a) Measure the bearing of town B from town A.

View solution

Answer(a) ..... [1]

(b) On the map, town C is 8 cm from town A on a bearing of 155°.

View solution

Mark the position of town C on the scale drawing. [2]

---

19 **(a)** Write 1.7×10^{-4} as an ordinary number.

View solution

Answer(a) ..... [1]

(b) Work out $(3.8 \times 10^{4}) \times (2.7 \times 10^{-8})$.
Give your answer in standard form.

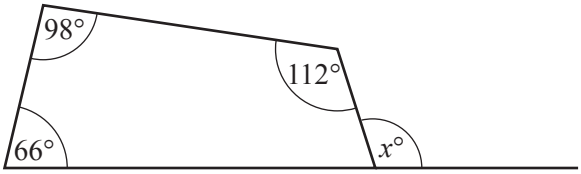
View solution

Answer(b) ..... [2]

© UCLES 2015

20 **(a)** The diagram shows a quadrilateral with one side extended.

View solution



NOT TO SCALE

Find the value of x.

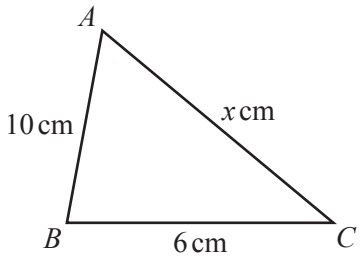
Answer(a) $x =$ ..... [2]

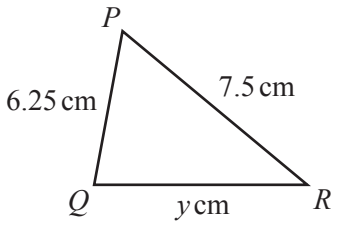
(b) Find the sum of the interior angles of a 25-sided polygon.

View solution

Answer(b) ..... [2]

21





NOT TO SCALE

The diagram shows two similar triangles ABC and PQR.

Find the value of

(a) x,

View solution

Answer(a) $x =$ ..... [2]

(b) y.

View solution

Answer(b) $y =$ ..... [2]

© UCLES 2015

22 Solve the simultaneous equations.
You must show all your working.

View solution

$$5x + 2y = 8$$
$$2x - 3y = 26$$

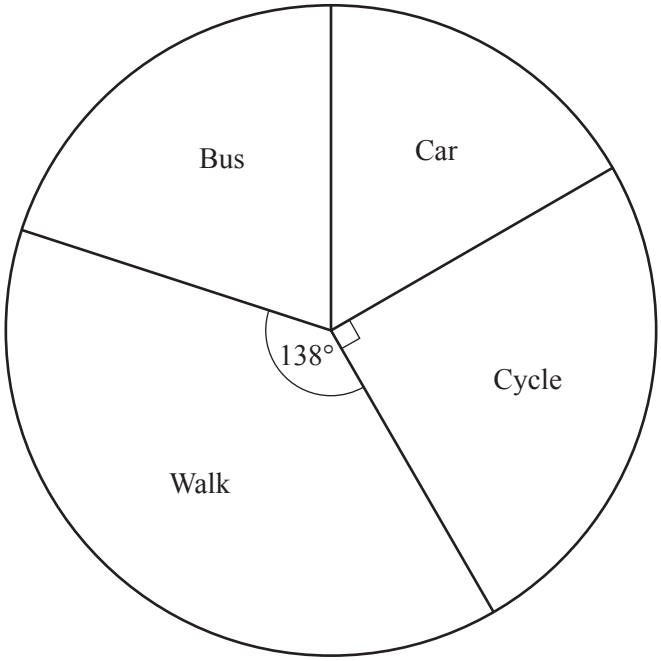
Answer $x =$ .....

$y =$ ..... [4]

© UCLES 2015

23 **(a)** The pie chart shows how 120 students travel to school.

View solution



(i) Measure the sector angle for the students who travel to school by car.

Answer(a)(i) ..... [1]

(ii) What fraction of the students cycle to school?

View solution

Answer(a)(ii) ..... [1]

(iii) Calculate how many students walk to school.

View solution

Answer(a)(iii) ..... [2]

© UCLES 2015

(b) Wei records the number of children living in each of the houses in a street.
Her results are recorded in the table.

View solution

Number of children	Frequency
0	3
1	3
2	8
3	5
4	4
5	2

Calculate the mean number of children per house.

Answer(b) ..... [3]

© UCLES 2015

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 International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

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