Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME	
CENTRE NUMBER	
CANDIDATE NUMBER	

MATHEMATICS **0580/13**

Paper 1 (Core) **May/June 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.

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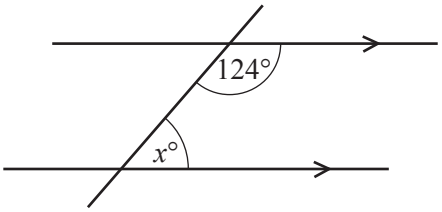
1 What is the value of the digit 7 in 43 782?

View solution

Answer ..... [1]

2

View solution



NOT TO SCALE

Find the value of x.

Answer x = ... [1]

---

3 Write 0.88 as a fraction in its simplest form.

View solution

Answer ..... [2]

---

4 Ahmed and Babar share 240 g of sweets in the ratio 7 : 3.

Calculate the amount Ahmed receives.

View solution

Answer ..... g [2]

---

5 Factorise completely.

$9x^2 - 6x$

View solution

Answer ..... [2]

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6 The mass of a car is 1400 kg correct to the nearest hundred kilograms.

Complete the statement about the mass, m kilograms, of the car.

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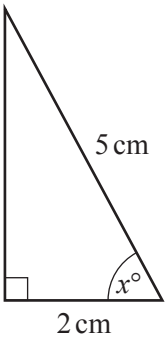
Answer ..... $\leqslant m <$ ..... [2]

7

View solution



NOT TO SCALE

Calculate the value of x.

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

---

8 **(a)** Work out.

$$(-6) - (-8)$$

View solution

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

(b) Write in the missing number.

$$-3 \times \text{.....} = 18$$

View solution

[1]

---

9 Use your calculator to work out

(a) $\sqrt{4.2^2 + 5.8^2}$,

View solution

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

(b) $\sqrt[3]{42.875}$.

View solution

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

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10 **(a)** Write 270 000 in standard form.

View solution

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

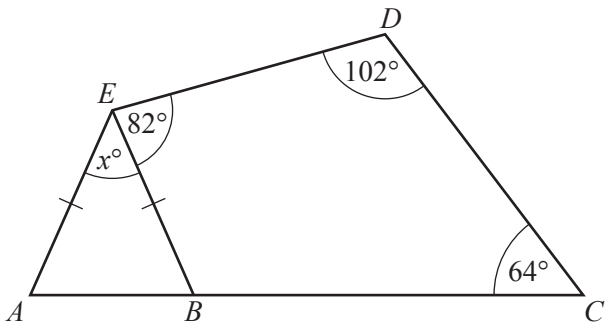
(b) Work out the mean of 6.4×10^7 and 8.5×10^8.
Write your answer in standard form.

View solution

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

11

View solution



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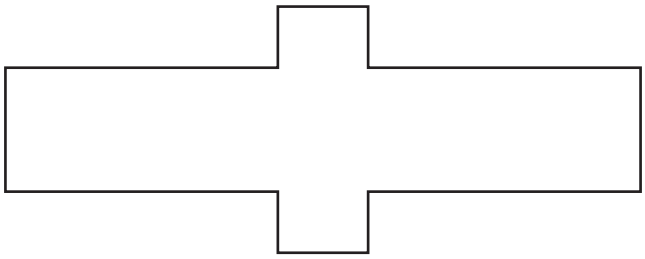
The diagram shows an isosceles triangle *ABE* and a quadrilateral *BCDE*.
ABC is a straight line.

Calculate the value of x.

Answer $x =$ ..... [3]

12



View solution

(a) On the shape, draw the lines of symmetry. [2]

View solution

(b) Write down the order of rotational symmetry of the shape.

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

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13 James buys a drink for 2 euros (€).

Work out the cost of the drink in pounds (£) when £1 = €1.252 .
Give your answer correct to 2 decimal places.

View solution

Answer £ ..... [3]

---

14 **Without using a calculator**, work out $1\frac{7}{8} \div \frac{5}{9}$.

Show all your working and give your answer as a fraction in its lowest terms.

View solution

Answer ..... [3]

---

15 Solve the equation.

$$3(x + 4) = 2(4x - 1)$$

View solution

Answer $x =$ ..... [3]

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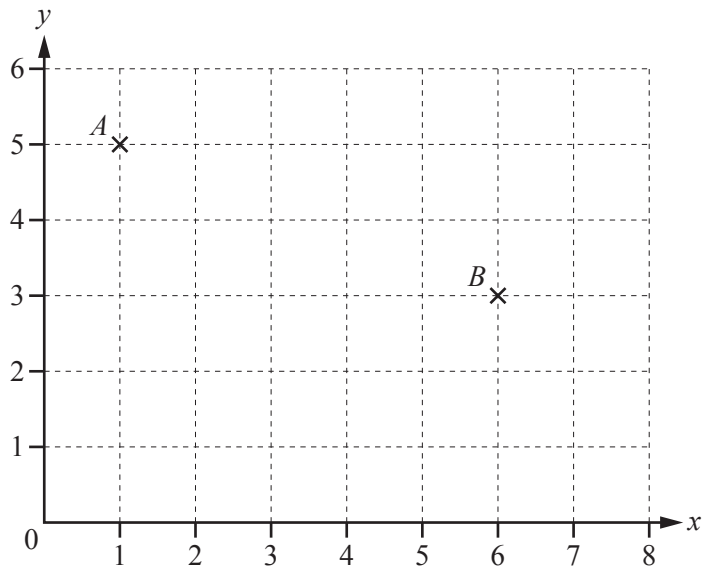
16 In a sale, the cost of a coat is reduced from \$85 to \$67.50 .

Calculate the percentage reduction in the cost of the coat.

View solution

Answer ..... % [3]

17



(a) Write down the co-ordinates of A.

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

(b) Write down the vector $\overrightarrow{AB}$.

View solution

Answer(b) $\overrightarrow{AB} = \begin{pmatrix} \quad \\ \quad \end{pmatrix}$ [1]

(c) Work out.

$$\begin{pmatrix} 4 \\ -6 \end{pmatrix} + \begin{pmatrix} 2 \\ 5 \end{pmatrix}$$

View solution

Answer(c) $\begin{pmatrix} \quad \\ \quad \end{pmatrix}$ [1]

(d) Work out.

$$6\begin{pmatrix} -3 \\ 7 \end{pmatrix}$$

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Answer(d) $\begin{pmatrix} \quad \\ \quad \end{pmatrix}$ [1]

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18 **(a)** Calculate $\dfrac{6.4 + 7.3}{19.56 - 3.51}$.

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Give your answer correct to 2 significant figures.

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

(b) Write the following numbers in order of size, smallest first.

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57% 0.5077 0.507 $\frac{5}{9}$

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

---

19 **(a)** Write down the prime number between 62 and 70.

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

(b) Write 54 as the product of its prime factors.

View solution

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

(c) Find the highest common factor (HCF) of 54 and 90.

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Answer(c) ..... [2]

Question 20 is printed on the next page.

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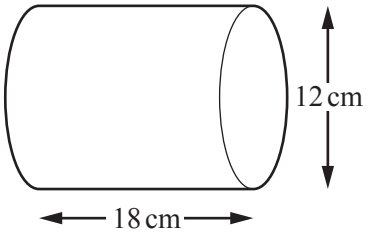
20 **(a)** A cylinder has diameter 12 cm and length 18 cm.



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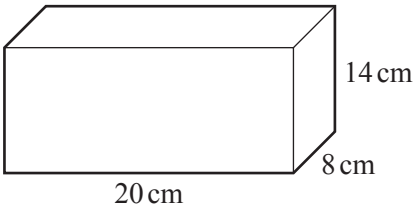
Calculate the volume of the cylinder.

Answer(a) ..... cm^3 [2]

(b)



NOT TO SCALE

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(i) Calculate the surface area of this cuboid.

Answer(b)(i) ..... cm^2 [3]

(ii) Write your answer to **part (b)(i)** in square millimetres.

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Answer(b)(ii) ..... mm^2 [1]

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