Cambridge IGCSE

**Cambridge International Examinations**
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

*3596716159*

**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 $\pi$, 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 **8** printed pages.

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

*Answer* ..... [1]

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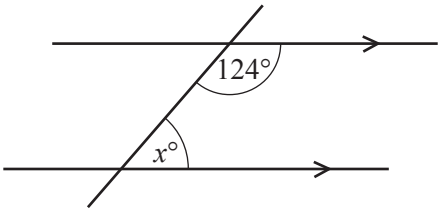
**2**




NOT TO SCALE

Find the value of $x$.

*Answer* $x$ = ..... [1]

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**3** Write 0.88 as a fraction in its simplest form.

*Answer* ..... [2]

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

Calculate the amount Ahmed receives.

*Answer* ..... g [2]

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**5** Factorise completely.

$9x^2 - 6x$

*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.

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

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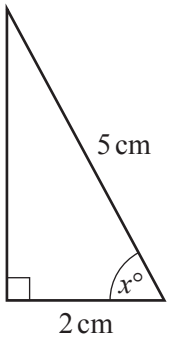
**7**




NOT TO SCALE

Calculate the value of $x$.

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

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**8** **(a)** Work out.

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

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

**(b)** Write in the missing number.

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

[1]

---

**9** Use your calculator to work out

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

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

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

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

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

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

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

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

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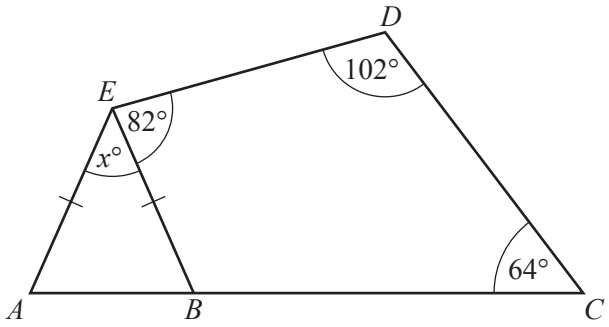
**11**




NOT TO SCALE

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

Calculate the value of $x$.

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

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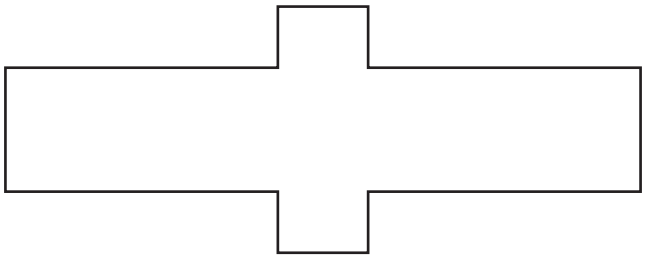
**12**



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

**(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.

*Answer* £ ..... [3]

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**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.

*Answer* ..... [3]

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**15** Solve the equation.

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

*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.

*Answer* ..... % [3]

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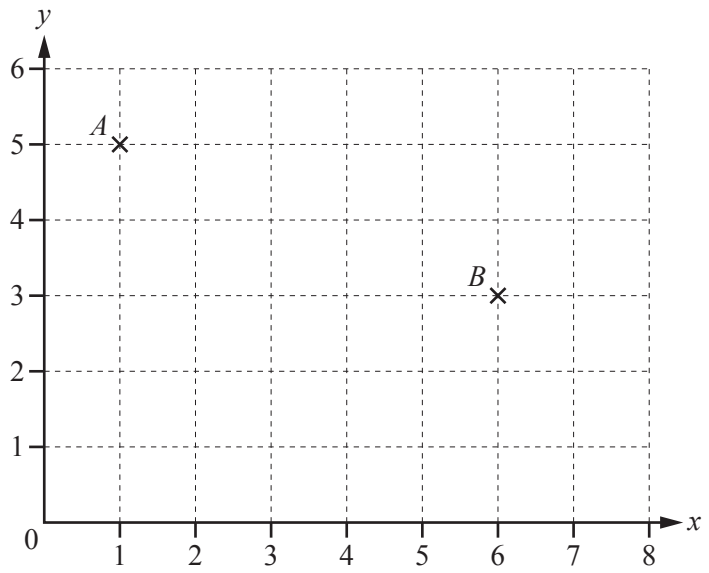
**17**




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

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

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

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

**(c)** Work out.

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

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

**(d)** Work out.

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

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

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

Give your answer correct to 2 significant figures.

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

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

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

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

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

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

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

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

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

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

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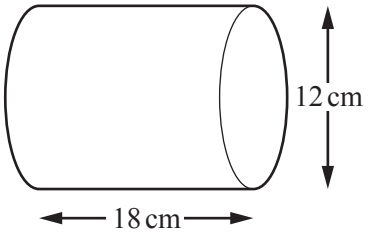
**Question 20 is printed on the next page.**

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

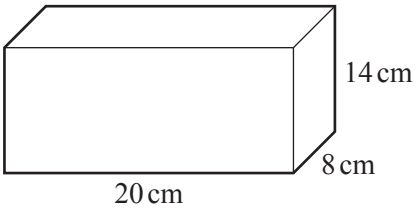



NOT TO SCALE

Calculate the volume of the cylinder.

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

**(b)**




NOT TO SCALE

**(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.

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