Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

MATHEMATICS **0580/12**

Paper 1 (Core) **May/June 2017**

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 **12** printed pages.

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1 Write 0.071 64 correct to 2 significant figures.

View solution

..... [1]

2 The probability that Stephanie wins her next tennis match is 0.85 .

View solution

Find the probability that Stephanie does not win her next tennis match.

..... [1]

3 Calculate $\sqrt{120} + 3.8^2 - 25$.

View solution

..... [1]

4 Work out 85 cents as a percentage of \$2.03 .

View solution

..... % [1]

5 Change $6200\,\text{cm}^2$ into m^2.

View solution

..... m^2 [1]

6 Factorise.

$14x - 21y$

View solution

..... [1]

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7 The daily temperature, in °C, at 3 pm in a town is shown below.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
3	−2	1	2	−4	3	5

(a) Which day had the coldest temperature?

View solution

..... [1]

(b) Work out the difference in the temperatures on Friday and Saturday.

View solution

..... °C [1]

8 Write these numbers in order of size, smallest first.

View solution

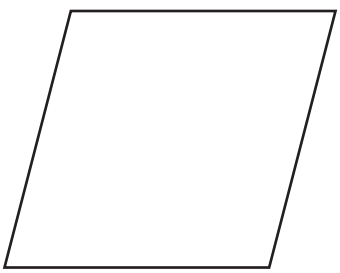
$\frac{7}{22}$ 0.3 33% $\frac{1}{3}$

..... < ..... < ..... < ..... [2]

smallest

9

View solution



The shape above is a rhombus.

Draw all the lines of symmetry on the shape. [2]

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10 **(a)** Write 0.03 as a percentage.

View solution

..... % [1]

(b) Write 37% as a fraction.

View solution

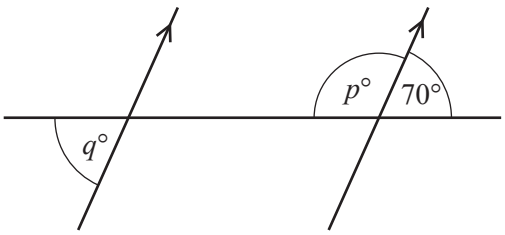
..... [1]

11 Find the value of $5a-3b$ when $a=7$ and $b=-2$.

View solution

..... [2]

12



NOT TO SCALE

View solution

The diagram shows a straight line intersecting two parallel lines.

Find the value of p and the value of q.

$p =$ .....

$q =$ ..... [2]

13 Solve.

$$2-x=5x+1$$

View solution

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

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14 **(a)** Write 0.0605 in standard form.

View solution

..... [1]

(b) Calculate $0.1 \times 5.1 \times 10^4$, giving your answer in standard form.

View solution

..... [1]

15 The mass, m kilograms, of a cat is 2.7 kg, correct to 1 decimal place.

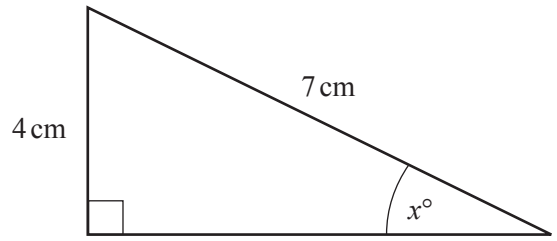
View solution

Complete the statement about the value of m.

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

16

View solution



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Calculate the value of x.

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

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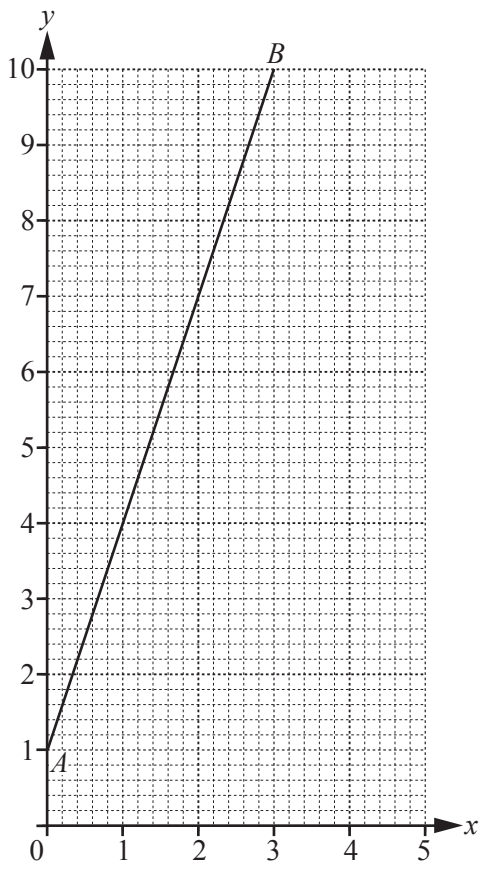
17

View solution



Find the gradient of the line AB.

..... [2]

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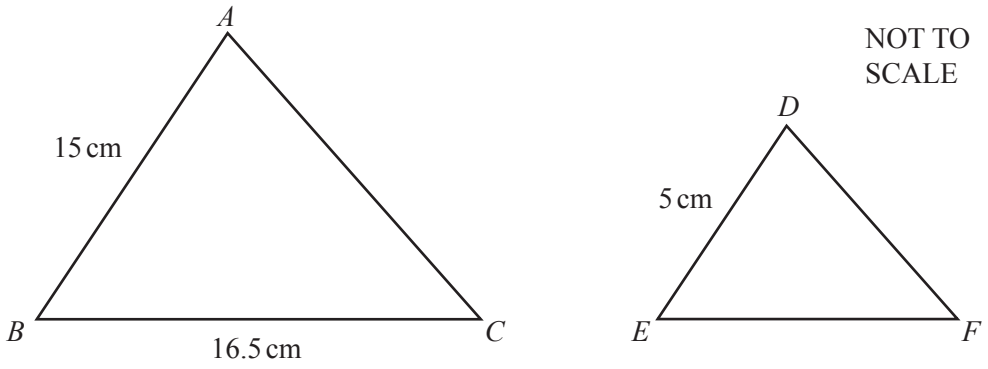
18



Triangles *ABC* and *DEF* are similar.

Find the length of *EF*.

EF = ... cm [2]

19 The exchange rate between dollars and euros(€) is €1 = $1.158 .

(a) Felicity changes €4900 into dollars.

Work out how many dollars she receives.

$ ..... [1]

(b) Ricky changes $2895 into euros.

Work out how many euros he receives.

€ ..... [2]

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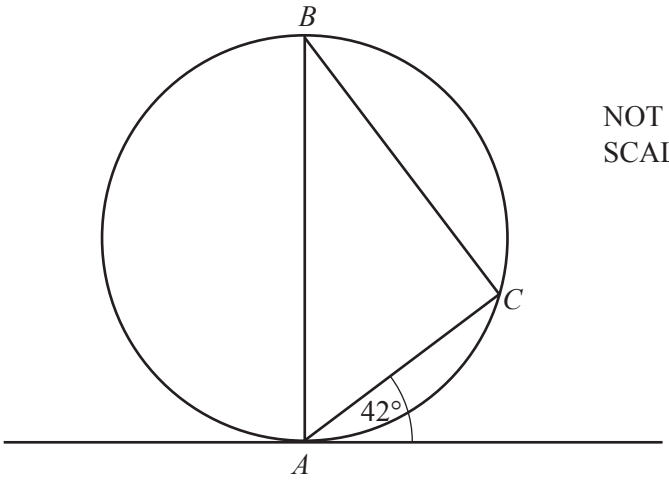
20



NOT TO SCALE

A, B and C are points on the circumference of a circle with diameter AB.
A tangent is drawn at A.

Find

(a) angle BAC,

View solution

Angle BAC = ... [1]

(b) angle ABC.

View solution

Angle ABC = ... [2]

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21 **(a)** **Without using a calculator**, work out $\frac{5}{6} - \frac{1}{2}$.

View solution

Show all the steps of your working and give your answer as a fraction in its simplest form.

..... [2]

(b) Show that $4\frac{1}{6} \times 1\frac{4}{5} = 7\frac{1}{2}$.

View solution

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

[2]

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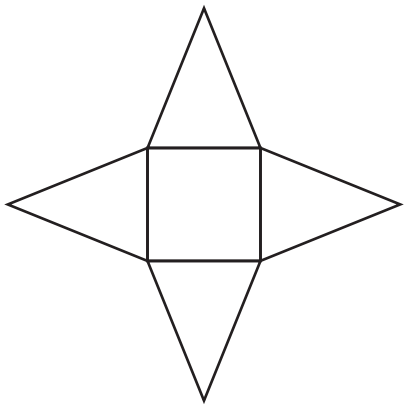
22 **(a)** Each diagram shows the net of a solid.

View solution

Write down the mathematical name of each solid.

(i)



..... [1]

View solution

(ii)



..... [1]

View solution

(b) The cross section of this prism is a trapezium.

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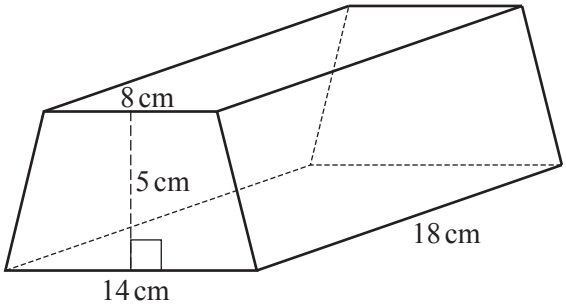

Calculate the volume of the prism.

..... cm^3 [3]

23 Pablo has $16 400 to invest in one of these savings plans.

View solution

Plan A pays compound interest at a rate of 4% per year.
Plan B pays simple interest at a rate of 4% per year.

Pablo invests the $16 400 for 3 years.

Calculate how much more he will receive from Plan A than from Plan B.
Give your answer correct to 2 decimal places.

$ ..... [5]

Question 24 is printed on the next page.

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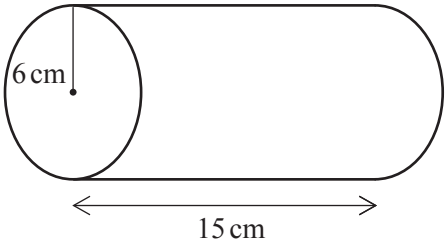
24 **(a)** Work out the area of a circle with radius 6 cm.

View solution

..... cm^2 [2]

(b) A solid cylinder has length 15 cm and radius 6 cm.

View solution



NOT TO SCALE

Calculate the total surface area of the cylinder.

..... cm^2 [4]

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