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0580/12

May/June 2017

1 hour

Additional Materials: Electronic calculator Geometrical instruments
 Tracing paper (optional)

READ THESE INSTRUCTIONS FIRST

DO **NOT** WRITE IN ANY BARCODES.

For π , use either your calculator value or 3.142.

The total of the marks for this paper is 56.

This document consists of **12** printed pages.

- 1 Write 0.071 64 correct to 2 significant figures.

..... [1]

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

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

..... [1]

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

..... [1]

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

..... % [1]

- 5 Change 6200 cm^2 into m^2 .

..... m^2 [1]

- 6 Factorise.

$$14x - 21y$$

..... [1]

- 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?

..... [1]

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

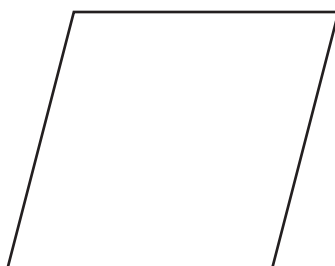
..... °C [1]

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

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

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

9



The shape above is a rhombus.

Draw all the lines of symmetry on the shape.

[2]

- 10 (a) Write 0.03 as a percentage.

..... % [1]

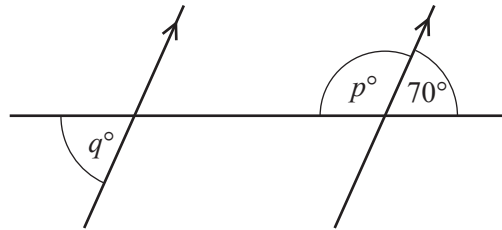
- (b) Write 37% as a fraction.

..... [1]

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

..... [2]

12



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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.

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

$x =$ [2]

- 14 (a) Write 0.0605 in standard form.

..... [1]

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

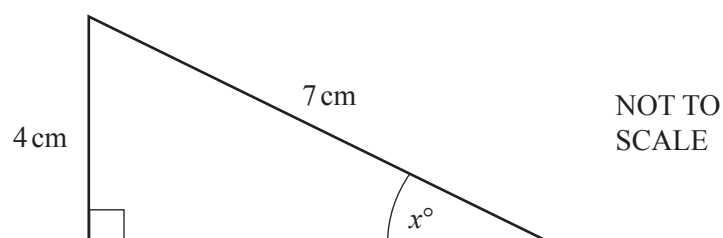
..... [1]

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

Complete the statement about the value of m .

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

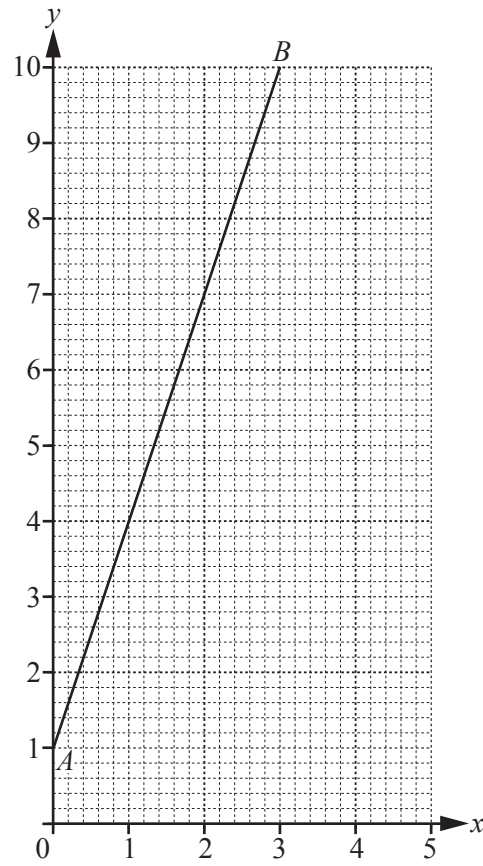
16



Calculate the value of x .

$x =$ [2]

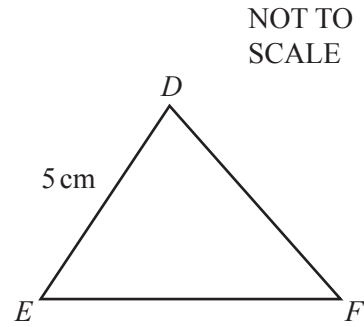
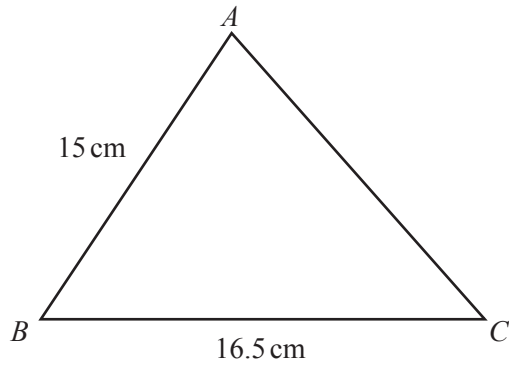
17



Find the gradient of the line AB .

..... [2]

18



Triangles ABC and DEF are similar.

Find the length of EF .

$EF = \dots\dots\dots\text{ cm}$ [2]

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

(a) Felicity changes $\text{€}4900$ into dollars.

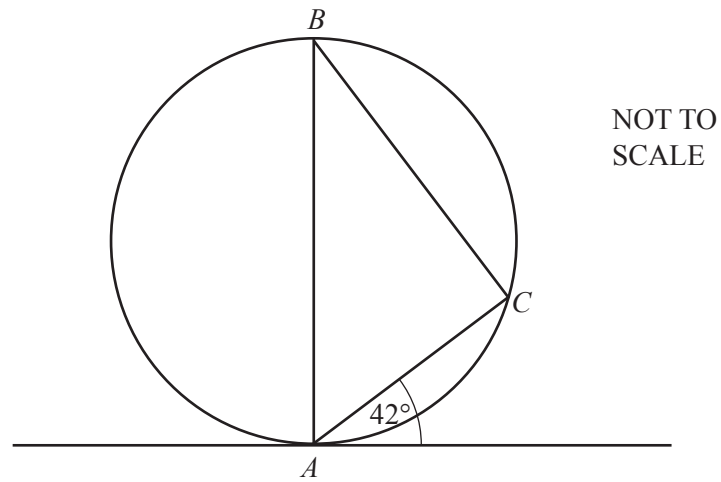
Work out how many dollars she receives.

$\$ \dots\dots\dots$ [1]

(b) Ricky changes $\$2895$ into euros.

Work out how many euros he receives.

$\text{€} \dots\dots\dots$ [2]



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 ,

Angle BAC = [1]

(b) angle ABC .

Angle ABC = [2]

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

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

..... [2]

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

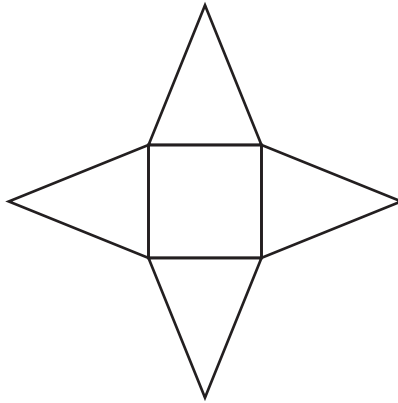
Do not use a calculator and show all the steps of your working.

[2]

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

Write down the mathematical name of each solid.

(i)



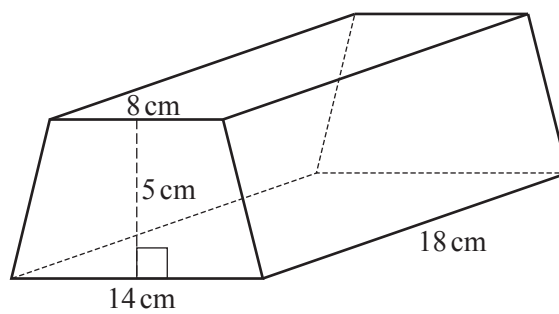
..... [1]

(ii)



..... [1]

- (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.

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.

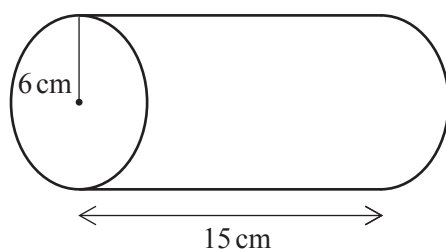
\$ [5]

Question 24 is printed on the next page.

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

..... cm^2 [2]

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



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Calculate the total surface area of the cylinder.

..... cm^2 [4]

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