

INTRO TO

0580

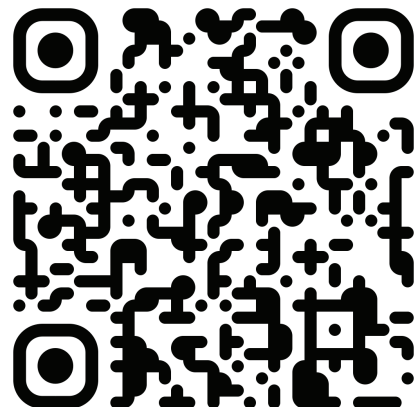
IGCSE

Past Paper Questions (Calculator)



Do it yourself first
You learn better from your mistakes

MEMO
VIDEO



- 1** Make r the subject of this formula.
 $p = 3r - 5$

$$r = \dots\dots\dots [2]$$

- 2** $a = \frac{b^2}{5c}$

Find b when $a = 5.625$ and $c = 2$.

$$b = \dots\dots\dots [2]$$

- 3** Factorise completely.

$$2x^3 - 18xy^2$$

$$\dots\dots\dots [3]$$

- 4** Simplify.

$$6(2x + 1) - 5(x - 2)$$

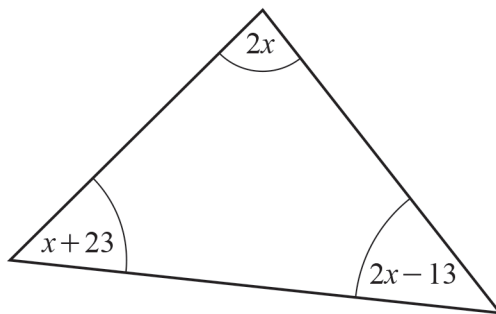
$$\dots\dots\dots [2]$$

- 5 Make a the subject of the formula.

$$\frac{\sqrt{a}}{p} = c$$

..... [2]

- 6 In this question, all angles are in degrees.



NOT TO
SCALE

- (a) Use the information in the triangle to write down an equation in terms of x .

..... [1]

- (b) Solve this equation to find the value of x .

$x =$ [3]

- (c) Work out the size of the smallest angle in the triangle.

..... [2]

7 In a sale, a shop reduces all prices by 12%.

- (a) Dina buys a book which has an original price of \$6.50 .

Calculate how much Dina pays for the book.

\$ [2]

- (b) Elu pays \$11 for a toy.

Calculate the original price of the toy.

\$ [2]

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The diagram shows a regular polygon.

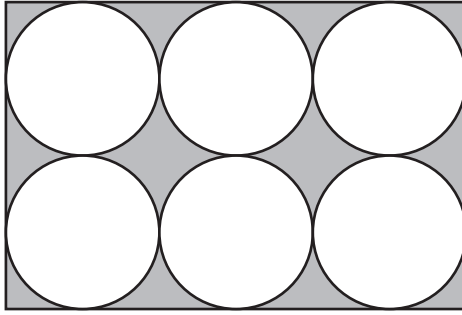
- (a) Write down the mathematical name of this polygon.

..... [1]

- (b) Show that the interior angle of this polygon is 135° .

[2]

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NOT TO
SCALE

The diagram shows a rectangle with 6 congruent circles inside.
Each circle touches the adjacent circles and the sides of the rectangle.
The radius of each circle is 8 cm.

- (a) Show that the length of the rectangle is 48 cm.

[1]

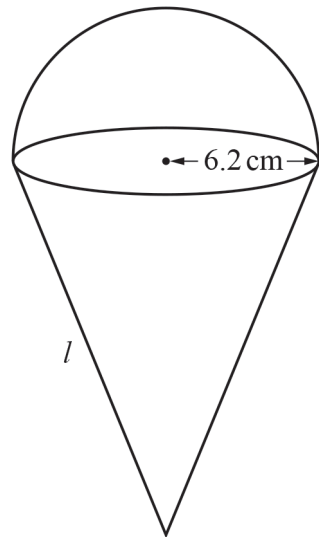
- (b) Find the area of the rectangle.
Give the units of your answer.

..... [3]

- (c) Calculate the percentage of the rectangle that is shaded.

..... % [3]

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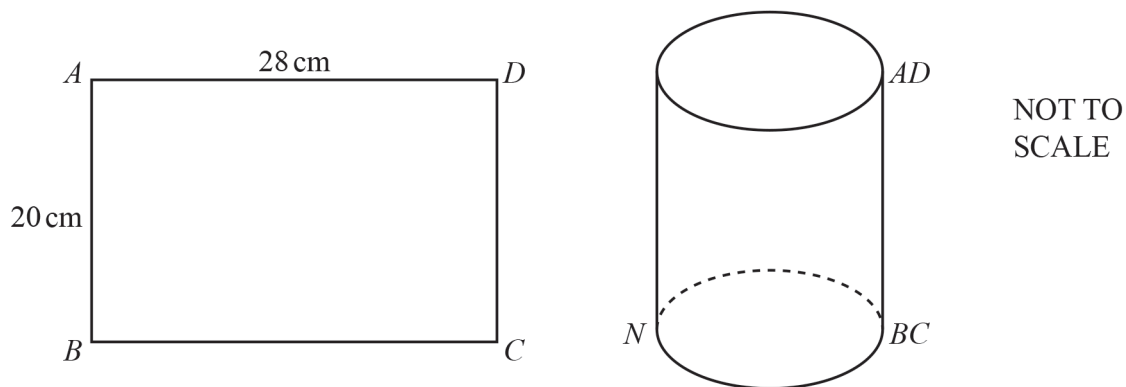
NOT TO
SCALE

The diagram shows a solid metal shape made from a cone and a hemisphere, both with radius 6.2 cm. The total surface area of the solid shape is 600 cm^2 .

Calculate the slant height, l , of the cone.

$l = \dots\dots\dots \text{ cm}$ [4]

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A rectangular sheet of paper $ABCD$ is made into an open cylinder with the edge AB meeting the edge DC . $AD = 28\text{ cm}$ and $AB = 20\text{ cm}$.

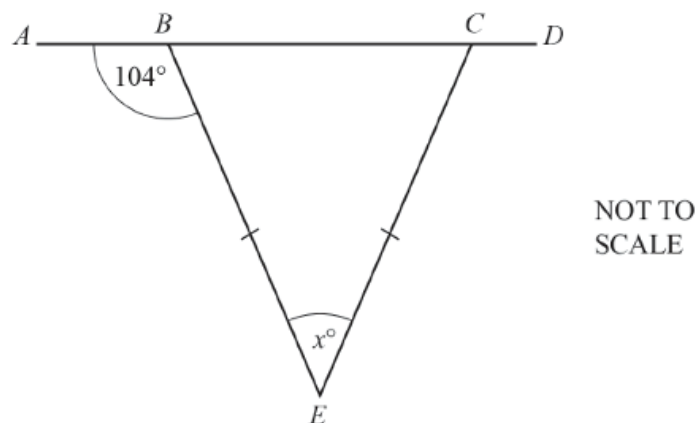
- (a) Show that the radius of the cylinder is 4.46 cm , correct to 3 significant figures.

[2]

- (b) Calculate the volume of the cylinder.

..... cm^3 [2]

- 12 The diagram shows triangle BCE and a straight line $ABCD$. $BE = CE$ and angle $ABE = 104^\circ$.



Find the value of x

$x =$ [1]