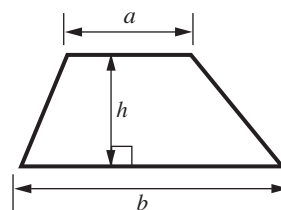


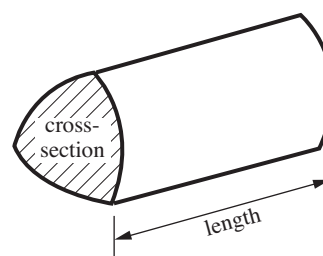


Formulae Sheet

Area of trapezium = $\frac{1}{2} (a + b)h$



Volume of prism = (area of cross-section) \times length



PLEASE DO NOT WRITE ON THIS PAGE

- 7 (a) To make 'dry mix', cement and sand are mixed in the ratio 1 : 3.

Find the volume of cement and the volume of sand in 0.68 m^3 of dry mix.

(a) Cement m^3

Sand m^3 [2]

- (b) Mortar is made by adding water to dry mix.
To lay 1000 bricks, 0.54 m^3 of mortar is used.

How much mortar is needed to lay 1800 bricks?

(b) m^3 [2]

4	
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- 8 Write down the integers, n , which satisfy this inequality.

$$4 \leq 2n < 11$$

..... [3]

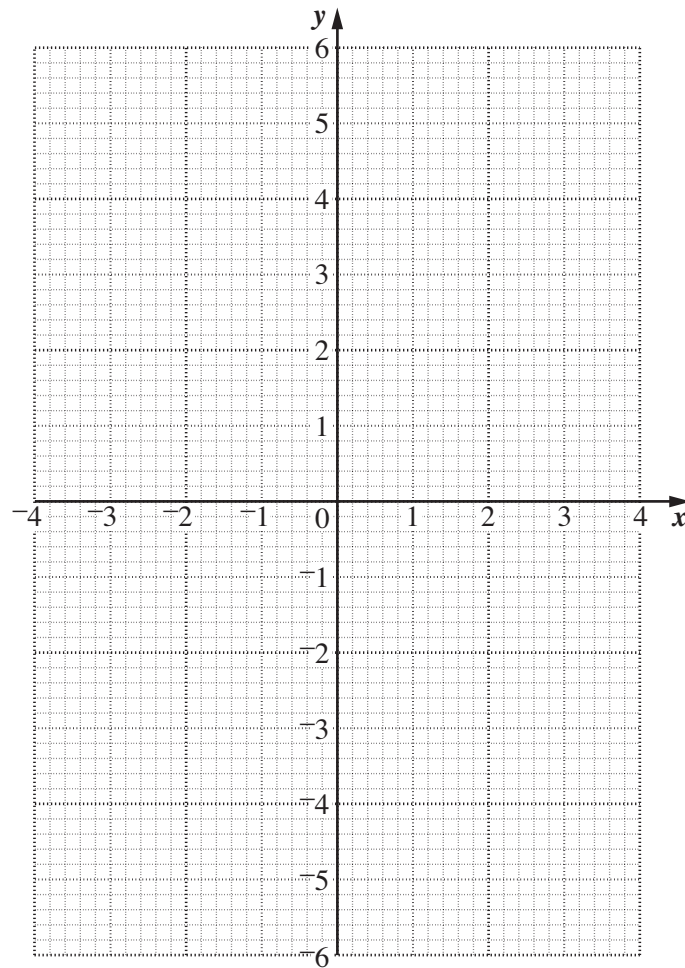
3	
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- 9 (a) Complete the table of values for $y=x^2-3$.

x	-3	-2	-1	0	1	2	3
y	6		-2	-3	-2		6

[1]

- (b) On the grid below, draw the graph of $y=x^2-3$ for values of x from -3 to 3.



[2]

- (c) Use your graph to solve the equation $x^2-3=0$.

(c)and [1]

4

10 (a) Simplify.

$$y^2 \times y^6$$

(a) [1]

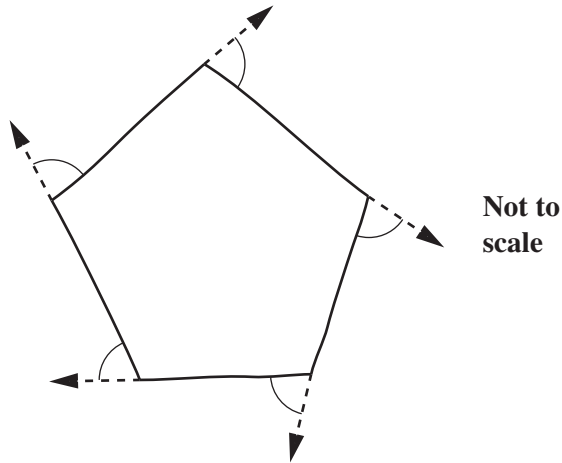
(b) Multiply out.

$$(x+3)(x+1)$$

(b) [2]

3

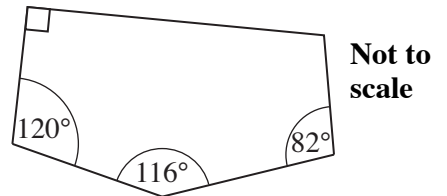
- 11 (a) Show that the exterior angle of a regular pentagon is 72° .



.....
 [1]

- (b) Four of the interior angles of an irregular pentagon are 90° , 120° , 116° and 82° .

Calculate the size of the remaining interior angle.



(b) $^\circ$ [3]

4

- 12** Anita picked 50 apples and weighed them.
The results are summarised in the table below.

Weight (w grams)	Frequency
$60 \leq w < 100$	13
$100 \leq w < 140$	20
$140 \leq w < 180$	11
$180 \leq w < 220$	6

Calculate an estimate of the mean weight of these apples.

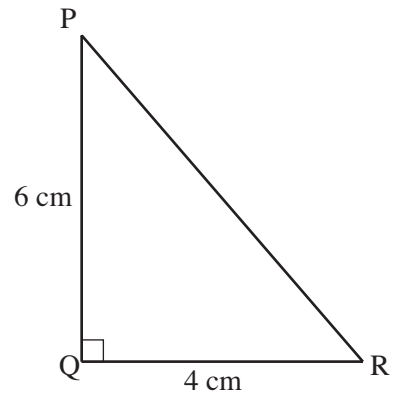
..... g [4]

4	
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TURN OVER FOR QUESTION 13

13 PQR is a right-angled triangle.

Calculate PR.



Not to scale

..... cm [3]

3

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