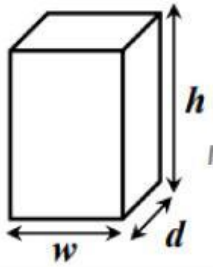
Algebra

Formulae

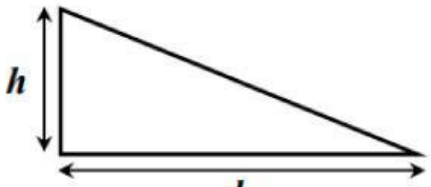
10a. Work out the volume (v) of this cuboid using the formula $v = w \times h \times d$, if w = 3cm, h = 5.5cm and d = 2cm.



Not to scale

VF

10b. Work out the area (a) of this shape using the formula $a = (b \times h) \div 2$, if b = 5cm and h = 3.2cm.



Not to scale

VF

11a. Circle the correct formula for doubling a number and finding 45%.

$a = 2n \times 0.45$

$a = n \times 2.45$

$a = \frac{2n}{0.45}$

VF

11b. Circle the correct formula for finding 125% of a number.

$a = n \div 12.5$

$a = 0.125n$

$a = n + 0.25n$

VF

12a. To calculate the BMI of a person, you can use their weight in kilograms and height in metres.

Expressed as the formula:

$$b = \frac{w}{h^2}$$

If someone is 2m tall (h) and weighs 92 kg (w), what is their BMI?

VF

12b. To work out the speed of a travelling car, you can use the distance in miles and the time in hours.

Expressed as the formula:

$$s = \frac{d}{t}$$

If a car travels 12 miles (d) in 30 minutes (t), what speed was it travelling at?

VF

LIVEWORKSHEETS

7. The price for a design to be printed on a bag varies, depending on the number of colours used.

The formula below is used to calculate the cost of the printing service:

Price = £1.54 x number of colours + £2.02

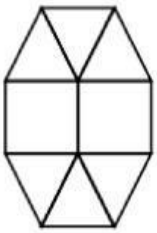


An extra 10% is then added to the final cost of the service.
What is the total price for printing a design that includes 7 colours?

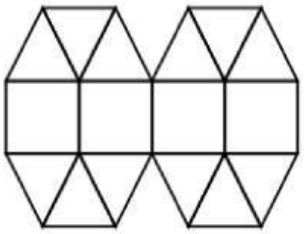
VF
HW/Ext

8. Sarah is creating designs using two different shapes.

She gives each shape a value.



Total value
= 12



Total value
= 24

The formula to create the shapes is always 6 triangles + 2 squares, written $6t + 2s$.

If $s = 0.75$, what is the value of t?

VF
HW/Ext

LIVEWORKSHEETS