



Calculate the force if the pressure is  $500\text{N/m}^2$  and the area is  $20\text{m}^2$

$$p \quad F \quad A \quad F = p \times A$$

$$500 \times 20$$

$$10000\text{N}$$

Sophia is  $x$  years old.  $x+3$   
 Tom is 3 years older than Sophia.  
 Patryk is twice as old as Sophia.  $2x$   
 The total of their ages is 51.

Write an expression for Tom's age in terms of  $x$ .

$$x + 3$$

Write an expression for Patryk's age in terms of  $x$ .

$$2x$$

Form an equation in  $x$  and solve it to work out Sophia's age.

$$4x + 3 = 51$$

$$4x = 48$$

$$x = 12$$

she is 12

Miss Green completes a journey in 3 stages.

In stage 1, she drives at a speed of  $40\text{km/h}$  for 45 minutes.  $45\text{ mins}$

In stage 2, she drives at  $60\text{ km/h}$  for 2 hours 9 minutes.  $129\text{ mins}$

Altogether, over the 3 stages, Miss Green drives  $171.6\text{km}$  in 3 hours 15 minutes  $195\text{ mins}$

stage 2  
 $\downarrow$

$$60 \times 2.15 = 129\text{ km}$$

How far did Miss Green travel in stage 1?

$$d = 40 \times 0.75$$

$$= 30\text{ km.}$$

What is her average speed, in  $\text{km/h}$ , in stage 3?

$$195 - 129 - 45 = 21\text{ mins.}$$

$$171.6 - 129 - 30 = 12.6$$

$$s = \frac{d}{t} = \frac{12.6}{0.35} \quad s = 36\text{ km/h}$$