

# m3 = 17 days to go!

9 Without using a calculator and showing every step in your working, calculate  $\frac{2}{9} \div 4$  giving your answer in its simplest form.

$$\frac{2}{9} \div 4$$

$$\frac{2}{9} \div \frac{4}{1}$$

$$\frac{2}{9} \times \frac{1}{4}$$

Answer  $\frac{1}{18}$  [2]

$$\frac{2}{36}$$
$$\frac{1}{18}$$

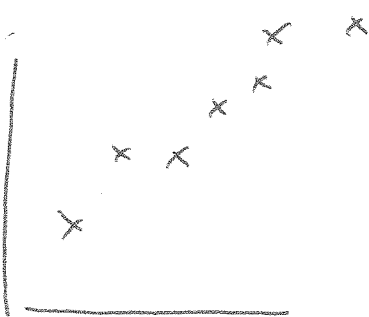
20 (a) Complete the sentence with appropriate words:

As the age (in years) of a family car increases, its value in pounds (£)

decreases, hence there is negative correlation. [1]

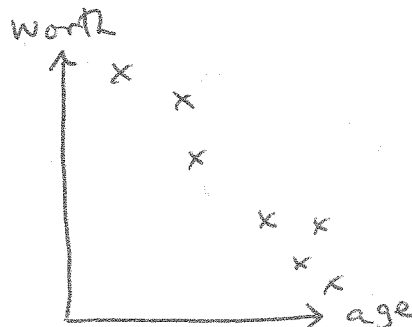
(b) Write down two variables (quantities) which would display no correlation.

height of student and maths test result [1]



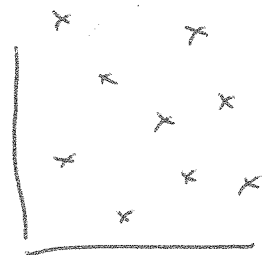
positive

As one thing increases then the other increases as well



negative

As one thing increases then the other decreases.



no correlation  
no pattern

28 Solve

$$\frac{3x-2}{6} - \frac{x-2}{3} = \frac{7}{4}$$

Find the same  
common denominator  
of 6, 3 and 4

Show all your working.

A solution by trial and improvement will not be accepted.

$$\frac{2(3x-2)}{12} - \frac{4(x-2)}{12} = \frac{21}{12}$$

$$2(3x-2) - 4(x-2) = 21$$

$$6x - 4 - 4x + 8 = 21$$

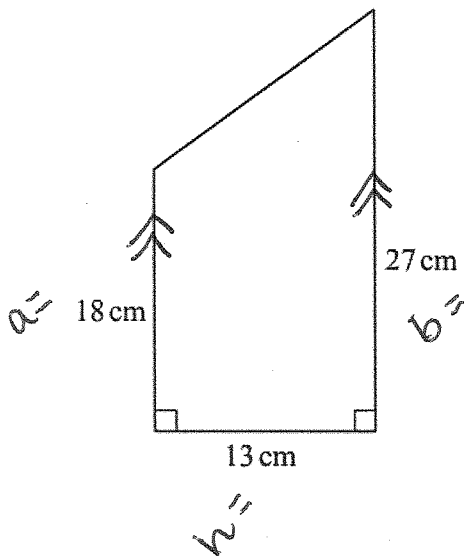
SWAP SIDE

SWAP SIGN

$$\begin{aligned} 2x + 4 &= 21 \\ 2x &= 17 \quad (-4) \\ x &= 8\frac{1}{2} \quad (\div 2) \end{aligned}$$

$$\text{Answer } x = \underline{8\frac{1}{2}} \quad [4]$$

3 Find the area of this trapezium.



$$A = \frac{1}{2}(a+b)h$$

formula  
page

$$A = \frac{1}{2}(18+27)13$$

Substitute

$$A = \frac{1}{2}(45)13$$

Working

$$A = 292.5$$

Answer.

$$\text{Answer } \underline{292.5} \text{ cm}^2 \quad [2]$$