



Make a the subject

$$\frac{a}{n} - \frac{w}{c} = \frac{a - w}{p}$$

w is directly proportional to the square of y .

y is inversely proportional to the cube root of x .

$$w = 306 \text{ when } y = 6.$$

$$\text{When } x = 125, y = 48$$

Given that w , y and x are positive, find the value of x when

$$w = 12240000.$$

The maximum load that an elevator can safely lift is 2000kg to the nearest 100kg. The average adult is 80kg to the nearest 5 kg.

Bethan says that the maximum number of people that can safely use the elevator is 26, since $2050 \div 77.5 = 26.45\dots$

Explain why Bethan is incorrect.

Sketch the graph of

$$f(x) = -x^2 - 2x + 10$$

showing the coordinates of the turning points and the coordinates of any intercepts with the coordinate axes.