



a is directly proportional to the cube of c.

w is inversely proportional to the square root of a

When  $c = 2$ ,  $a = 48$

When  $a = 9$ ,  $w = 2400$

Find the value of w when  $c = 6$

The points D, E, F and G lie in a straight line.

$$DE : EG = 1 : 4$$

$$DF : FG = 9 : 11$$

Work out  $DE : EF : FG$

Find the equation of the line that is perpendicular to  $5x + y = 8$  and passes through the point (3, 9)

A rectangle has an area of  $\sqrt{80} \text{ cm}^2$   
The length of the rectangle is  $(2 + \sqrt{5}) \text{ cm}$

Calculate the width.

Express your answer in the form

$$p + q\sqrt{5}$$