



Which equation has solutions which are rational?

$$\frac{5y^2}{3} = 12 \quad \frac{5y^2}{7} = 17 \quad \frac{5y^2}{2} = 10$$

$$5y^2 = 20$$

$$y^2 = 4$$

$$y = 2 \text{ or } -2$$

Write down the gradient of a line that is perpendicular to the line $y = 2x$

$$-\frac{1}{2}$$

Write down the equation of a line perpendicular to $y = 2x$

$$y = -\frac{1}{2}x + 5$$

A is inversely proportional to the square of B.

$$A \propto \frac{1}{B^2}$$

When $A = 10$, $B = 4$.

$$A = \frac{k}{B^2}$$

Find A when $B = 10$

$$10 = \frac{k}{16} \quad k = 160$$

$$A = \frac{160}{B^2}$$

$$A = \frac{160}{100}$$

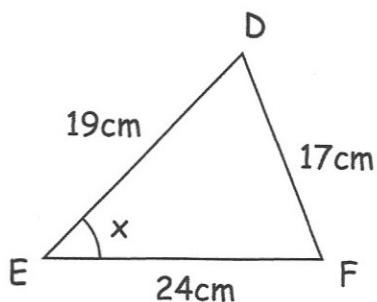
$$A = 1.6$$

Simplify

$$\frac{x^2 + 8x + 15}{x^2 - x - 12}$$

$$\frac{(x+3)(x+5)}{(x-4)(x+3)}$$

$$\frac{x+5}{x-4}$$



Find the size of angle DEF

$$\cos x = \frac{19^2 + 24^2 - 17^2}{2 \times 19 \times 24}$$

$$\cos x = \frac{27}{38}$$

$$x = 44.72^\circ$$