



Find the equation of the straight line through $(0, 5)$ which is perpendicular to the line

$$y = 9x - 4$$

$$-\frac{1}{9}$$

$$y = -\frac{1}{9}x + c$$

$$5 = 0 + c$$

$$c = 5$$

$$y = -\frac{1}{9}x + c$$

$$y = -\frac{1}{9}x + 5$$

Convert $0.0454545\dots$ into a fraction

$$x = 0.04545\dots$$

$$10x = 0.4545\dots$$

$$1000x = 454.545\dots$$

$$990x = 45$$

$$x = \frac{45}{990}$$

$$x = \frac{1}{22}$$

Simplify

$$\frac{x^2 - 1}{x^2 + x}$$

$$\frac{(x-1)(x+1)}{x(x+1)}$$

$$\frac{x-1}{x}$$

A number has been rounded to 10, correct to 1 significant figure.

Francesca says that the lower bound is 9.5 and the upper bound is 10.5

Explain why Francesca is wrong.

$$LB = 9.5$$

$$UB = 15$$

Expand and simplify $(4 - x)^3$

$$(4 - x)(4 - x)(4 - x)$$

$$(16 - 4x - 4x + x^2)(4 - x)$$

$$(16 - 8x + x^2)(4 - x)$$

$$64 - 16x - 32x + 8x^2 + 4x^2 - x^3$$

$$64 - 48x + 12x^2 - x^3$$