

Problem 0580/42/F/M/20 Q7B

y is inversely proportional to x^2 .

When $x = 4$, $y = 7.5$.

Find y when $x = 5$.

Sol

$$y = \frac{k}{x^2}$$

$$7.5 = \frac{k}{4^2}$$

$$k = 7.5 \times 16 = 120$$

$$y = \frac{120}{x^2}$$

$$y = \frac{120}{25} =$$

$$y = \frac{4.8}{\dots\dots\dots} \quad [3]$$