

Answer on Question #54256 – Math – Algebra

Mr. Rosarios land is 20 meters wide and 38 meters long. If he is to proportionally increase the size of his lot so that it becomes 45 meters wide, what would his length be?

Solution

If land was 20 meters wide and became 45 meters wide, then we can find the proportionality factor as follows

$$k = \frac{45}{20} = \frac{9}{4}$$

Thus, his length is

$$k \cdot 38 = \frac{9}{4} \cdot 38 = \frac{9}{2} \cdot \frac{38}{2} = \frac{9}{2} \cdot 19 = \frac{9 \cdot 19}{2} = \frac{171}{2} = 85\frac{1}{2} \text{ (meters).}$$

Answer: $85\frac{1}{2}$ meters.