

Question#20583

Bill works for a local fencing company. A customer came in to order 220 feet of fence for his 2,925 square-foot rectangular garden. Bill was talking to the customer about the crops he was planting and forgot to ask the dimensions (width and length) of the garden. Can you help Bill figure out the dimensions so he does not have to call the customer on the phone

Solution:

Such as a perimeter of the rectangle is:

$$P = 2Width + 2Length$$

And a square of the rectangle is:

$$S = Width * Length$$

Write a system of the equations:

$$\begin{cases} 2Width + 2Length = 220 \\ Width * Length = 2.925 \end{cases}$$

The solutions of the system are:

$$Width = 45$$

$$Length = 65$$

Answer: width is 45 feet, length is 65 feet.