

The length of a rectangle with constant area varies inversely as the width. When the length is 18 ft, the width is 8 ft. Find the length when the width is 9 ft.

$$A = LW$$

When $W=8$ and $L=18$

$$A = 8 * 18 = 144$$

When $W=9$

$$144 = L * 9$$

$$L = \frac{144}{9} = 16 \text{ ft}$$

Answer: 16 ft.