Recall: A line labeled as in Figure 1 is cut in Extreme and Mean ratio when

$$\frac{\overline{AB}}{\overline{AC}} = \frac{\overline{AC}}{\overline{CB}}.$$

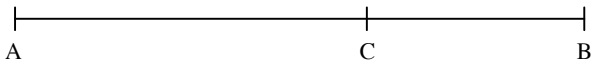

Figure 1:

When the above relationship is true, let
$\overline{CB} = 1$
$\overline{AC} = x$,
so $\overline{AB} = 1 + x$.

1. Rewrite the equation $\frac{\overline{AB}}{\overline{AC}} = \frac{\overline{AC}}{\overline{CB}}$ using the values shown above.
2. Solve the equation for x.

   Hint: Quadratic formula: if $ax^2 + bx + c = 0$, then either $x = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$ or $x = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$.