

You may have incorrectly simplified the fraction to $\frac{1}{\sqrt{2}}$ and then rationalized that denominator. You *could* rewrite

$$\frac{\sqrt{5}}{\sqrt{10}} = \sqrt{\frac{5}{10}} = \sqrt{\frac{1}{2}} = \frac{\sqrt{1}}{\sqrt{2}} = \frac{1}{\sqrt{2}}. \text{ This is not equal to } \frac{5}{\sqrt{10}}.$$