You may have thought that you could rewrite the numerator as $\sqrt{a+b}$, then proceeded to rationalize the denominator. You may have been thinking of $\sqrt{a} \cdot \sqrt{b} = \sqrt{ab}$, but there is no similar rule for addition. The first two steps are:

$$\frac{\sqrt{a}+\sqrt{b}}{\sqrt{a}} \cdot \frac{\sqrt{a}}{\sqrt{a}} = \frac{\sqrt{a} \cdot \sqrt{a} + \sqrt{b} \cdot \sqrt{a}}{\sqrt{a^2}}$$

Multiply the radicals, then simplify each term. The correct answer is: $\frac{a+\sqrt{ab}}{a}$