Arithmetic with Radicals

Happily, adding with radicals is no different from adding other expressions. Remember

\[ 2x + 9x = (2 + 9)x \quad \text{We factor first.} \]
\[ = 11x. \quad \text{Then we can just add the constants.} \]

This means we can do the following.

\[ 2\sqrt{5} + 9\sqrt{5} = (2 + 9)\sqrt{5} \quad \text{We factor first.} \]
\[ = 11\sqrt{5}. \quad \text{Then we can just add the constants.} \]