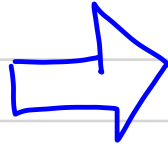


Multiplying Radicals

multiply insides



simplify again

(simplify first if you can)

$$\begin{aligned} \textcircled{1} \quad & \sqrt{12} \sqrt{3} \\ & \sqrt{4 \cdot 3} \quad \downarrow \\ & \sqrt{4} \sqrt{3} \sqrt{3} \\ & 2\sqrt{3 \cdot 3} \end{aligned}$$

$$\begin{aligned} & 2\sqrt{9} \\ & \downarrow \\ & 2 \cdot 3 \\ & \boxed{6} \end{aligned}$$

$$\begin{aligned} & \sqrt{12} \sqrt{3} \\ & \sqrt{36} \\ & \boxed{6} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & \sqrt{5} \sqrt{10} \\ & \sqrt{5 \cdot 10} \\ & \sqrt{50} \\ & \sqrt{25 \cdot 2} \\ & \sqrt{25} \sqrt{2} \\ & \boxed{5\sqrt{2}} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & \sqrt{6} \sqrt{6} \\ & \sqrt{36} \\ & \boxed{6} \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & \sqrt{8} \sqrt{8} \rightarrow \sqrt{8 \cdot 8} \\ & \quad \quad \quad \sqrt{8^2} \\ & \quad \quad \quad 8 \\ & \boxed{8} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad & \sqrt{4321} \sqrt{4321} \\ & \boxed{4,321} \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad & \sqrt{3x} \sqrt{3x^2} \\ & \sqrt{3x \cdot 3x^2} \\ & \sqrt{9x^3} \\ & \sqrt{9} \sqrt{x^3} \\ & 3 \sqrt{x^2 x} \\ & 3x \sqrt{x} \end{aligned}$$