

# Simplifying Radical Expressions

sqrt, cube roots  
nth roots

$$\begin{aligned}\sqrt{18} + \sqrt{32} &= \\ &= \sqrt{3^2 \cdot 2} + \sqrt{2^5} \\ &= \sqrt{3^2} \cdot \sqrt{2} + \sqrt{2^4} \cdot \sqrt{2} \\ &= 3\sqrt{2} + 4\sqrt{2} = 7\sqrt{2}\end{aligned}$$

$$\begin{aligned}\sqrt{9095625} &= \sqrt{3^3 \cdot 5^4 \cdot 7^2 \cdot 11} = \sqrt{3^2 \cdot 5^4 \cdot 7^2} \cdot \sqrt{33} \\ &= 3 \cdot 5^2 \cdot 7 \sqrt{33} \\ &= 525\sqrt{33}\end{aligned}$$