

Simplify Square Roots

1. Simplify $\sqrt{250}$.

2. Simplify $\sqrt{200}$.

3. Simplify $\sqrt{504}$.

4. Simplify $\sqrt{24}$

5. Simplify $\sqrt{338}$

Go to [onlinemathlearning.com](https://www.onlinemathlearning.com) for more free math resources

Simplify Square Roots

1. Simplify $\sqrt{250}$.

$$\begin{aligned}\sqrt{250} &= \sqrt{2 \times 5^3} \\ &= \sqrt{2} \times \sqrt{5^2} \times \sqrt{5} \\ &= 5\sqrt{2} \times \sqrt{5} \\ &= 5\sqrt{10}\end{aligned}$$

2. Simplify $\sqrt{200}$.

$$\begin{aligned}\sqrt{200} &= \sqrt{2^3 \times 5^2} \\ &= \sqrt{2^2} \times \sqrt{2} \times \sqrt{5^2} \\ &= 2 \times 5\sqrt{2} \\ &= 10\sqrt{2}\end{aligned}$$

3. Simplify $\sqrt{504}$.

$$\begin{aligned}\sqrt{504} &= \sqrt{2^3 \times 3^2 \times 7} \\ &= \sqrt{2^2} \times \sqrt{2} \times \sqrt{3^2} \times \sqrt{7} \\ &= 2 \times 3 \times \sqrt{2} \times \sqrt{7} \\ &= 6\sqrt{14}\end{aligned}$$

4. Simplify $\sqrt{24}$

$$\begin{aligned}\sqrt{24} &= \sqrt{2^2 \times 6} \\ &= \sqrt{2^2} \times \sqrt{6} \\ &= 2\sqrt{6}\end{aligned}$$

5. Simplify $\sqrt{338}$

$$\begin{aligned}\sqrt{338} &= \sqrt{13^2 \times 2} \\ &= \sqrt{13^2} \times \sqrt{2} \\ &= 13\sqrt{2}\end{aligned}$$

Go to [onlinemathlearning.com](https://www.onlinemathlearning.com) for more free math resources