

Simplify. Show all work.

NOTES

1.  $\sqrt{32}$

$$\begin{array}{c} \wedge \\ 16 \ 2 \\ \textcircled{4 \ 4} \\ 4\sqrt{2} \end{array}$$

2.  $\sqrt{180}$

$$\begin{array}{c} \wedge \\ 90 \\ \wedge \\ 2 \ 45 \\ \wedge \\ 3 \ 15 \\ \wedge \\ \textcircled{3 \ 3} \ 5 \\ 6\sqrt{5} \end{array}$$

3.  $\sqrt{63}$

$$\begin{array}{c} \wedge \\ 7 \ 9 \\ \textcircled{3 \ 3} \\ 3\sqrt{7} \end{array}$$

4.  $3\sqrt{75}$

$$\begin{array}{c} \wedge \\ 3 \ 25 \\ \textcircled{5 \ 5} \\ 15\sqrt{3} \end{array}$$

5.  $3\sqrt{48}$

$$\begin{array}{c} \wedge \\ 3 \ 16 \\ \textcircled{4 \ 4} \\ 12\sqrt{3} \end{array}$$

6.  $5\sqrt{8}$

$$\begin{array}{c} 2 \cdot 5\sqrt{2} \\ 10\sqrt{2} \end{array}$$

7.  $\frac{2}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

$\frac{2\sqrt{3}}{3}$

8.  $\frac{4}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}}$

$\frac{4\sqrt{6}}{6} = \frac{2\sqrt{6}}{3}$

9.  $\frac{\sqrt{2}}{\sqrt{3}}$

$\frac{\sqrt{2} \cdot \sqrt{3}}{3} = \frac{\sqrt{6}}{3}$

10)  $x\sqrt{5} = 6$

$x = \frac{6}{\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}}$

$x = \frac{6\sqrt{5}}{5}$

11)  $x\sqrt{3} = 18$

$x = \frac{18}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

$x = \frac{18\sqrt{3}}{3} = 6\sqrt{3}$