

Simplifying Radical Expressions

Date _____ Period _____

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Simplify. Note: Some radicals cannot be simplified (but not many).

1) $\sqrt{8}$

$2\sqrt{2}$

2) $\sqrt{180}$

$6\sqrt{5}$

3) $\sqrt{384}$

$8\sqrt{6}$

4) $\sqrt{294}$

$7\sqrt{6}$

5) $\sqrt{80}$

$4\sqrt{5}$

6) $\sqrt{42}$

$\sqrt{42}$

7) $\sqrt{128}$

$8\sqrt{2}$

8) $\sqrt{320}$

$8\sqrt{5}$

9) $\sqrt{210}$

$\sqrt{210}$

10) $\sqrt{252}$

$6\sqrt{7}$

11) $\sqrt{63}$

$3\sqrt{7}$

12) $\sqrt{512}$

$16\sqrt{2}$

13) $\sqrt{12}$

$2\sqrt{3}$

14) $\sqrt{24}$

$2\sqrt{6}$

15) $\sqrt{392}$

$14\sqrt{2}$

16) $\sqrt{50}$

$5\sqrt{2}$

17) $\sqrt{30}$

$\sqrt{30}$

18) $\sqrt{144}$

12

19) $\sqrt{200}$

$10\sqrt{2}$

20) $\sqrt{288}$

$12\sqrt{2}$

Simplify.

$$\begin{array}{l} 21) -5\sqrt{294} \\ -35\sqrt{6} \end{array}$$

$$\begin{array}{l} 22) -8\sqrt{392} \\ -112\sqrt{2} \end{array}$$

$$\begin{array}{l} 23) 2\sqrt{320} \\ 16\sqrt{5} \end{array}$$

$$\begin{array}{l} 24) 3\sqrt{8} \\ 6\sqrt{2} \end{array}$$

$$\begin{array}{l} 25) 8\sqrt{98} \\ 56\sqrt{2} \end{array}$$

$$\begin{array}{l} 26) 5\sqrt{200} \\ 50\sqrt{2} \end{array}$$

$$\begin{array}{l} 27) 8\sqrt{112} \\ 32\sqrt{7} \end{array}$$

$$\begin{array}{l} 28) -8\sqrt{384} \\ -64\sqrt{6} \end{array}$$

$$\begin{array}{l} 29) -\sqrt{20} \\ -2\sqrt{5} \end{array}$$

$$\begin{array}{l} 30) -2\sqrt{180} \\ -12\sqrt{5} \end{array}$$

$$\begin{array}{l} 31) 6\sqrt{144} \\ 72 \end{array}$$

$$\begin{array}{l} 32) 6\sqrt{27} \\ 18\sqrt{3} \end{array}$$

$$\begin{array}{l} 33) 6\sqrt{512} \\ 96\sqrt{2} \end{array}$$

$$\begin{array}{l} 34) -5\sqrt{27} \\ -15\sqrt{3} \end{array}$$

$$\begin{array}{l} 35) 5\sqrt{256} \\ 80 \end{array}$$

$$\begin{array}{l} 36) 2\sqrt{63} \\ 6\sqrt{7} \end{array}$$

$$\begin{array}{l} 37) -5\sqrt{175} \\ -25\sqrt{7} \end{array}$$

$$\begin{array}{l} 38) 4\sqrt{64} \\ 32 \end{array}$$

$$\begin{array}{l} 39) -4\sqrt{54} \\ -12\sqrt{6} \end{array}$$

$$\begin{array}{l} 40) 2\sqrt{50} \\ 10\sqrt{2} \end{array}$$

$$41) \sqrt{4} \cdot \sqrt{2}$$

$$2\sqrt{2}$$

$$42) \sqrt{5} \cdot \sqrt{3}$$

$$\sqrt{15}$$

$$43) \sqrt{3} \cdot \sqrt{5}$$

$$\sqrt{15}$$

$$44) \sqrt{6} \cdot \sqrt{15}$$

$$3\sqrt{10}$$

$$45) \sqrt{15} \cdot \sqrt{6}$$

$$3\sqrt{10}$$

$$46) \sqrt{15} \cdot \sqrt{15}$$

$$15$$

$$47) \sqrt{5} \cdot \sqrt{4}$$

$$2\sqrt{5}$$

$$48) \sqrt{8} \cdot \sqrt{10}$$

$$4\sqrt{5}$$

$$49) \sqrt{6} \cdot \sqrt{6}$$

$$6$$

$$50) \sqrt{3} \cdot \sqrt{3}$$

$$3$$

$$51) \sqrt{10} \cdot \sqrt{8}$$

$$4\sqrt{5}$$

$$52) \sqrt{6} \cdot \sqrt{3}$$

$$3\sqrt{2}$$

$$53) \sqrt{12} \cdot \sqrt{12}$$

$$12$$

$$54) \sqrt{10} \cdot \sqrt{6}$$

$$2\sqrt{15}$$

$$55) \sqrt{10} \cdot \sqrt{10}$$

$$10$$

$$56) \sqrt{15} \cdot \sqrt{10}$$

$$5\sqrt{6}$$

$$57) \sqrt{20} \cdot \sqrt{15}$$

$$10\sqrt{3}$$

$$58) \sqrt{25} \cdot \sqrt{3}$$

$$5\sqrt{3}$$

$$59) \sqrt{15} \cdot \sqrt{5}$$

$$5\sqrt{3}$$

$$60) \sqrt{8} \cdot \sqrt{6}$$

$$4\sqrt{3}$$