

## Addition and Subtraction of Square Roots

Simplify each of the following:

1.  $5\sqrt{3} - 2\sqrt{3}$

2.  $7\sqrt{5} + 11\sqrt{5}$

3.  $-4\sqrt{21} - 7\sqrt{21}$

4.  $5\sqrt{2} + \sqrt{72}$

5.  $2\sqrt{75} - \sqrt{3}$

6.  $-4\sqrt{5} + \sqrt{45}$

7.  $3\sqrt{12} - \sqrt{50}$

8.  $\sqrt{81} - \sqrt{36}$

9.  $\sqrt{32} + 4\sqrt{8}$

10.  $-2\sqrt{147} - \sqrt{27}$

11.  $\sqrt{125} + \sqrt{405}$

12.  $\sqrt{144} - \sqrt{54}$

13.  $5\sqrt{17} + 7\sqrt{6} - \sqrt{17}$

14.  $4\sqrt{28} + 2\sqrt{7} - \sqrt{14}$

14.  $\sqrt{48} - \sqrt{192} + \sqrt{12}$

16.  $-3\sqrt{5} + 4\sqrt{180} + 2\sqrt{27}$

17.  $\sqrt{50} + \sqrt{18} - \sqrt{8}$

18.  $\sqrt{45} - \sqrt{20} + \sqrt{125}$

19.  $\sqrt{27} - \sqrt{75} + \sqrt{48}$

20.  $\sqrt{18} + \sqrt{24} - \sqrt{54}$

21.  $\sqrt{28} - 2\sqrt{98} + \sqrt{63}$

22.  $\sqrt{24} + \sqrt{150} - \sqrt{96}$

23.  $4\sqrt{5} + \sqrt{80} + \sqrt{20}$

24.  $\sqrt{243} + \sqrt{75} - \sqrt{300}$

25.  $3x\sqrt{y} - 2x\sqrt{y}$

26.  $5\sqrt{x^3y} - 7x\sqrt{xy}$

27.  $4\sqrt{x^5y^3} + 2x^2\sqrt{xy^3} - 7xy\sqrt{x^3y}$

28.  $\sqrt{m^3n^5} + mn\sqrt{mn^3} - n^2\sqrt{m^3n}$

29.  $9\sqrt{x^4y^6z^{11}} - 3xy^2z^4\sqrt{x^4y^4z^3}$

30.  $12\sqrt{x^7y^6} + 2xy^3\sqrt{x^5} - 5x^3y^3\sqrt{x}$