

Name: \_\_\_\_\_



## Adding and Subtracting Radicals

Directions: Simplify each of the following.

1.)  $2\sqrt{2} + 3\sqrt{2} =$  \_\_\_\_\_

9.)  $3\sqrt{3} + 6\sqrt{3} =$  \_\_\_\_\_

2.)  $8\sqrt{3} - \sqrt{3} =$  \_\_\_\_\_

10.)  $7\sqrt{2} - 7\sqrt{2} =$  \_\_\_\_\_

3.)  $5\sqrt{5} + 5\sqrt{5} =$  \_\_\_\_\_

11.)  $5\sqrt{5} - \sqrt{20} =$  \_\_\_\_\_

4.)  $21\sqrt{7} - 7\sqrt{7} =$  \_\_\_\_\_

12.)  $14\sqrt{2} + \sqrt{18} =$  \_\_\_\_\_

5.)  $13\sqrt{6} - 12\sqrt{6} =$  \_\_\_\_\_

13.)  $\sqrt{12} + \sqrt{3} =$  \_\_\_\_\_

6.)  $\sqrt{11} + \sqrt{11} =$  \_\_\_\_\_

14.)  $14\sqrt{2} + \sqrt{18} =$  \_\_\_\_\_

7.)  $3\sqrt{13} + 8\sqrt{13} =$  \_\_\_\_\_

15.)  $10\sqrt{6} - \sqrt{24} =$  \_\_\_\_\_

8.)  $20\sqrt{2} - 3\sqrt{2} =$  \_\_\_\_\_

16.)  $\sqrt{32} + \sqrt{18} =$  \_\_\_\_\_

## ANSWER KEY

1.)  $2\sqrt{2} + 3\sqrt{2} = 5\sqrt{2}$

9.)  $3\sqrt{3} + 6\sqrt{3} = 9\sqrt{3}$

2.)  $8\sqrt{3} - \sqrt{3} = 7\sqrt{3}$

10.)  $7\sqrt{2} - 7\sqrt{2} = 0$

3.)  $5\sqrt{5} + 5\sqrt{5} = 10\sqrt{5}$

11.)  $5\sqrt{5} - \sqrt{20} = 3\sqrt{5}$

4.)  $21\sqrt{7} - 7\sqrt{7} = 14\sqrt{7}$

12.)  $14\sqrt{2} + \sqrt{18} = 17\sqrt{2}$

5.)  $13\sqrt{6} - 12\sqrt{6} = \sqrt{6}$

13.)  $\sqrt{12} + \sqrt{3} = 3\sqrt{3}$

6.)  $\sqrt{11} + \sqrt{11} = 2\sqrt{11}$

14.)  $14\sqrt{2} + \sqrt{18} = 17\sqrt{2}$

7.)  $3\sqrt{13} + 8\sqrt{13} = 11\sqrt{13}$

15.)  $10\sqrt{6} - \sqrt{24} = 8\sqrt{6}$

8.)  $20\sqrt{2} - 3\sqrt{2} = 17\sqrt{2}$

16.)  $\sqrt{32} + \sqrt{18} = 7\sqrt{2}$