

Name: _____ Date: _____ Per: _____

Adding and Subtracting Radicals 11.2 Practice 3

Simplify.

1. $2\sqrt{5} + 4\sqrt{5}$

2. $\sqrt{6} - 4\sqrt{6}$

3. $\sqrt{8} - \sqrt{2}$

4. $3\sqrt{75} + 2\sqrt{5}$

5. $\sqrt{20} + 2\sqrt{5} - 3\sqrt{5}$

6. $2\sqrt{3} + \sqrt{6} - 5\sqrt{3}$

7. $\sqrt{12} + 2\sqrt{3} - 5\sqrt{3}$

8. $3\sqrt{6} + 3\sqrt{2} - \sqrt{50} + \sqrt{24}$

9. $\sqrt{8a} - \sqrt{2a} + 5\sqrt{2a}$

10. $\sqrt{54} + \sqrt{24}$

11. $\sqrt{3} + \sqrt{\frac{1}{3}}$

12. $\sqrt{12} + \sqrt{\frac{1}{3}}$

13. $\sqrt{80} - \sqrt{20} + \sqrt{180}$

14. $\sqrt{54} - \sqrt{\frac{1}{6}}$

15. $\sqrt{50} + \sqrt{18} - \sqrt{75} + \sqrt{27}$

16. $2\sqrt{3} - 4\sqrt{45} + 2\sqrt{\frac{1}{3}}$

17. $\sqrt{125} - 2\sqrt{\frac{1}{5}} + \sqrt{\frac{1}{3}}$

18. $\sqrt{\frac{2}{3}} + 3\sqrt{3} - 4\sqrt{\frac{1}{12}}$

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Multiplying Radicals
11.2 Practice 3

Simplify.

1. $2(\sqrt{3} + 4\sqrt{5})$

2. $\sqrt{6}(\sqrt{3} - 2\sqrt{6})$

3. $\sqrt{5}(\sqrt{5} - \sqrt{2})$

4. $\sqrt{2}(3\sqrt{7} + 2\sqrt{5})$

5. $(2 - 4\sqrt{2})(2 + 4\sqrt{2})$

6. $(3 + \sqrt{6})^2$

7. $(2 - 2\sqrt{5})^2$

8. $3\sqrt{2}(\sqrt{8} + \sqrt{24})$

9. $\sqrt{8}(\sqrt{2} + 5\sqrt{8})$

10. $(\sqrt{5} - 3\sqrt{2})(\sqrt{5} + 3\sqrt{2})$

11. $(\sqrt{3} + \sqrt{6})^2$

12. $(\sqrt{2} - 2\sqrt{3})^2$

13. $(\sqrt{5} - \sqrt{2})(\sqrt{2} + \sqrt{6})$

14. $(\sqrt{8} - \sqrt{2})(\sqrt{3} + \sqrt{6})$

15. $(\sqrt{5} - \sqrt{18})(7\sqrt{5} + \sqrt{3})$

16. $(2\sqrt{3} - \sqrt{45})(\sqrt{12} + 2\sqrt{6})$

17. $(2\sqrt{5} - 2\sqrt{3})(\sqrt{10} + \sqrt{6})$

18. $(\sqrt{2} + 3\sqrt{3})(\sqrt{12} - 4\sqrt{8})$