

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

Teacher : \_\_\_\_\_ Date : \_\_\_\_\_

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### Adding and Subtracting Radical Expressions

**Simplify the Radical Expressions.**

1)  $\sqrt{99} + \sqrt{63} - \sqrt{44}$

6)  $6\sqrt{27} - 4\sqrt{27}$

2)  $\sqrt{20} + \sqrt{12} - 7\sqrt{80} + 2\sqrt{27}$

7)  $-\sqrt{5} + \sqrt{5}$

3)  $-\sqrt{11} + \sqrt{44}$

8)  $3\sqrt{5} - 9\sqrt{5} - 2\sqrt{5}$

4)  $-\sqrt{28} + 7\sqrt{8} - 5\sqrt{63} + 7\sqrt{32}$

9)  $-\sqrt{6} + \sqrt{6} + \sqrt{6}$

5)  $-\sqrt{20} - \sqrt{20}$

10)  $-6\sqrt{27} - 6\sqrt{18} - 5\sqrt{48}$

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## Multiplying Radical Expressions

Simplify the Radical Expressions.

1)  $3\sqrt{20b} \cdot -5\sqrt{112b}$

6)  $-5\sqrt{20} \cdot -3\sqrt{48}$

2)  $\sqrt{44} (-\sqrt{45} - \sqrt{112})$

7)  $-\sqrt{18n} \cdot \sqrt{48n}$

3)  $(-4\sqrt{2d^2} + 6\sqrt{7})(2\sqrt{2d^2} + \sqrt{7})$

8)  $\sqrt{12p} (-\sqrt{45p^2} + \sqrt{32p^3})$

4)  $(-\sqrt{11} + \sqrt{5})(\sqrt{11} + \sqrt{5})$

9)  $(7\sqrt{5q^2} - 4\sqrt{7})(-\sqrt{5q^2} - 5\sqrt{7})$

5)  $-\sqrt{28} \cdot -\sqrt{45}$

10)  $\sqrt{44} (\sqrt{18} + \sqrt{112})$