

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

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

## Multiplying Radical Expressions

Simplify the Radical Expressions.

1)  $(-\sqrt{3b^2} + 3\sqrt{5})(-7\sqrt{3b^2} - 6\sqrt{5})$       6)  $(5\sqrt{3} - 5\sqrt{7})(-6\sqrt{3} + 7\sqrt{7})$

2)  $2\sqrt{32} \cdot -6\sqrt{45}$

7)  $-\sqrt{12} \cdot -\sqrt{32}$

3)  $\sqrt{18}(\sqrt{20} - \sqrt{112})$

8)  $-3\sqrt{27p}(-5\sqrt{20p^2} + 5\sqrt{176p^3})$

4)  $7\sqrt{48g} \cdot 7\sqrt{20g}$

9)  $(-\sqrt{3q^2} - \sqrt{5})(\sqrt{3q^2} + \sqrt{5})$

5)  $\sqrt{63h}(-\sqrt{176h^2} + \sqrt{20h^3})$

10)  $\sqrt{12r} \cdot \sqrt{99r}$



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## Multiplying Radical Expressions

Simplify the Radical Expressions.

$$1) (-\sqrt{3b^2} + 3\sqrt{5}) (-7\sqrt{3b^2} - 6\sqrt{5})$$

$$21b^2 - 15b\sqrt{15} - 90$$

$$6) (5\sqrt{3} - 5\sqrt{7}) (-6\sqrt{3} + 7\sqrt{7})$$

$$-335 + 65\sqrt{21}$$

$$2) 2\sqrt{32} \cdot -6\sqrt{45}$$

$$-144\sqrt{10}$$

$$7) -\sqrt{12} \cdot -\sqrt{32}$$

$$8\sqrt{6}$$

$$3) \sqrt{18} (\sqrt{20} - \sqrt{112})$$

$$6\sqrt{10} - 12\sqrt{14}$$

$$8) -3\sqrt{27p} (-5\sqrt{20p^2} + 5\sqrt{176p^3})$$

$$90p\sqrt{15p} - 180p^2\sqrt{33}$$

$$4) 7\sqrt{48g} \cdot 7\sqrt{20g}$$

$$392g\sqrt{15}$$

$$9) (-\sqrt{3q^2} - \sqrt{5}) (\sqrt{3q^2} + \sqrt{5})$$

$$-3q^2 - 2q\sqrt{15} - 5$$

$$5) \sqrt{63h} (-\sqrt{176h^2} + \sqrt{20h^3})$$

$$-12h\sqrt{77h} + 6h^2\sqrt{35}$$

$$10) \sqrt{12r} \cdot \sqrt{99r}$$

$$6r\sqrt{33}$$

