

Name : _____ Score : _____

Teacher : _____ Date : _____

Adding and Subtracting Radical Expressions

Simplify the Radical Expressions.

1) $-\sqrt{24} + \sqrt{12} + \sqrt{54} - \sqrt{48}$

6) $8\sqrt{12} + 2\sqrt{12}$

2) $\sqrt{63} - 2\sqrt{63}$

7) $\sqrt{3} + \sqrt{3}$

3) $\sqrt{96} - \sqrt{112} + \sqrt{54} - \sqrt{28}$

8) $6\sqrt{11} + 2\sqrt{11} - 6\sqrt{99}$

4) $2\sqrt{12} + 8\sqrt{44} - 5\sqrt{48}$

9) $\sqrt{18} + \sqrt{18} - \sqrt{18}$

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

10) $9\sqrt{3} + \sqrt{12}$

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Simplify the Radical Expressions.

$$1) \frac{-\sqrt{24} + \sqrt{12} + \sqrt{54} - \sqrt{48}}{\sqrt{6} - 2\sqrt{3}}$$

$$6) \frac{8\sqrt{12} + 2\sqrt{12}}{20\sqrt{3}}$$

$$2) \frac{\sqrt{63} - 2\sqrt{63}}{-3\sqrt{7}}$$

$$7) \frac{\sqrt{3} + \sqrt{3}}{2\sqrt{3}}$$

$$3) \frac{\sqrt{96} - \sqrt{112} + \sqrt{54} - \sqrt{28}}{7\sqrt{6} - 6\sqrt{7}}$$

$$8) \frac{6\sqrt{11} + 2\sqrt{11} - 6\sqrt{99}}{-10\sqrt{11}}$$

$$4) \frac{2\sqrt{12} + 8\sqrt{44} - 5\sqrt{48}}{-16\sqrt{3} + 16\sqrt{11}}$$

$$9) \frac{\sqrt{18} + \sqrt{18} - \sqrt{18}}{3\sqrt{2}}$$

$$5) \frac{-\sqrt{7} + \sqrt{7}}{0}$$

$$10) \frac{9\sqrt{3} + \sqrt{12}}{11\sqrt{3}}$$