

## Adding and Subtracting Radicals (Square Roots)

Name \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_

**Like Radicals** have the same radicand

$$6\sqrt{2} \quad \text{and} \quad 4\sqrt{2}$$

**Unlike Radicals** have different radicands

$$6\sqrt{3} \quad \text{and} \quad 4\sqrt{5}$$

We can add and subtract like radicals

$$6\sqrt{2} + 4\sqrt{2} = 10\sqrt{2}$$

$$6x + 4x = 10x$$

We can not add and subtract unlike radicals

$$6\sqrt{3} + 4\sqrt{5}$$

$$6y + 4z$$

Perform the following operations

$$3\sqrt{3} + 5\sqrt{3}$$

$$3\sqrt{5} + 4\sqrt{7} - 6\sqrt{5} + 9\sqrt{7}$$

$$8\sqrt{6} - 2\sqrt{6}$$

$$2\sqrt{3} + 8\sqrt{6} - 3\sqrt{5} + 4\sqrt{7}$$

Perform the following operations

$$\sqrt{8} + 3\sqrt{2}$$

$$3\sqrt{2} + 4\sqrt{8} - 6\sqrt{32} + 9\sqrt{18}$$

$$8\sqrt{3} - 2\sqrt{27}$$

$$2\sqrt{3} - 5\sqrt{6} + 9\sqrt{12} + 6\sqrt{24}$$

Like Radicals have the same radicand

$$6\sqrt{2} \quad \text{and} \quad 4\sqrt{2}$$

Unlike Radicals have different radicands

$$6\sqrt{3} \quad \text{and} \quad 4\sqrt{5}$$

We can add and subtract like radicals

$$6\sqrt{2} + 4\sqrt{2} = 10\sqrt{2}$$

$$6x + 4x = 10x$$

We can not add and subtract unlike radicals

$$6\sqrt{3} + 4\sqrt{5}$$

$$6y + 4z$$