Name: _____ Date: _____

Adding and Subtracting Radicals Notes

To add or subtract radicals, combine _____ _____!

Make sure all radicals are _____!

Add / subtract the numbers in _____ of the radicals **(like terms only!).**

Example 1 – Like Radicals

$$2\sqrt{5} + 3\sqrt{5}$$

a) Add the numbers in front of the radical.

_____ + _____ = _____

b) Keep same radical (keep like terms).

$2\sqrt{5} + 3\sqrt{5}$ = _____

Example 2 - Unlike radicals:

$$3\sqrt{3} - 4\sqrt{2} + \sqrt{3} + 7\sqrt{2}$$

a) Group like radicals.

_____ + _____ + _____ + _____

b) Add numbers in front of like radicals.

_____

Example 3 – Simplify Radical First, then add or subtract:

$$\sqrt{8} - \sqrt{5} + 4\sqrt{2}$$

a) Simplify $\sqrt{8}$.

_____ = _____

b) Group like radicals.

_____ + _____ + _____

c) Add the numbers in front of like radicals.

_____

Example 4 – Simplify Radical First, then add or subtract:

$$10\sqrt{27} - \sqrt{3} - 4\sqrt{75}$$

a) Simplify $\sqrt{27}$.

_____ = _____

b) Simplify $\sqrt{75}$.

_____ = _____

c) Group like radicals.

_____ + _____ + _____

d) Add the numbers in front of like radicals.

_____