

Name _____

Algebra II

Lesson 7.3

Binomial Radical Expressions

Square roots that have the same radicand are called **like radical terms**.

Example: $4\sqrt{5}$ and $7\sqrt{5}$ are *like radicals*. The addition/subtraction property of a variable may be applied to numbers with like radicals. Hence, like radicals may be added or subtracted: $4\sqrt{5} + 7\sqrt{5} = 11\sqrt{5}$

Simplify: $\sqrt{50} + 3\sqrt{32} - 5\sqrt{18}$

Multiplication of radicals that are in the form of a binomial may be done using the FOIL method.

Example: $(2 + \sqrt{7})(1 + 3\sqrt{7})$

When multiplying conjugates, you will find that the radicals will drop out:

Example: $(3 + \sqrt{7})(3 - \sqrt{7})$

When a radical binomial is in the denominator, to rationalize it you will still multiply by "1" in the form of the

conjugate: **Example:** $\frac{6+\sqrt{15}}{4-\sqrt{15}}$