Coreq Support for Section 1.6a

# Topic 1: Methods of Factoring

# (Videos: Greatest Common Factor and Factoring by Grouping; Factoring Trinomials of the Form ; Factoring Trinomials of the Form ; Factoring Binomials)

Recall that in previous sections we used several methods of factoring.

* Factoring a greatest common factor
* Factoring by grouping
* Difference of perfect squares
* Factoring trinomials

# Topic 2: Solving Quadratic Equations by Factoring and the Zero Product Property

Recall from section 1.4 that some quadratic equations can be solved by factoring and by using the zero-product property.

**The Zero Product Property:** If , then  or  or both.

# Topic 3: Solving Quadratic Equations By Using the Square Root Property

In section 1.4, we also solved quadratic equations by using the square root property.

**The Square Root Property:** The solution to the quadratic equation, or equivalently, is .

# Topic 4: Squaring Binomials

# (Video: Special Products 0:00 – 8:20)

Squaring a binomial can be visualized geometrically as the area of a square with side length $(a+b)$ where $a$ and $b$ are both positive, real numbers.





This leads to two identities that can be used to square a binomial.





# Topic 5: Multiplying the Sum and Difference of Two Terms

# (Video: Special Products 8:21 – 13:18)

Another special product is the product of the sum and difference of the same two terms. For products such as this, the linear terms cancels out, leaving the **difference of squares**. This can be generalized as the following identity.

