Name:_____            Date:_____

Notes
Algebra Section 9.7
Pages 600-605

**Goal:** "You will factor special products"

**Difference of Two Squares Pattern:**       $a^2 - b^2 =$

**Example:**   $4x^2 - 9 =$

**Factor:**

**Ex:** $y^2 - 16$                  **Ex:** $x^2 - 9$                  **Ex:** $25m^2 - 16$

**Ex:** $x^2 - 49y^2$               **Ex:** $8 - 18n^2$             **Ex:** $4y^2 - 64$

**Ex:** $64c^2 - 16$              **Ex:** $x^2 - 81y^2$           **Ex:** $12 - 48m^2$

**Ex:** $n^2 - 12n + 36$         **Ex:** $9x^2 - 12x + 4$       **Ex:** $4s^2 + 4st + t^2$

**Ex**: $a^2 + 6a + 9$            **Ex**: $4n^2 + 20n + 25$      **Ex**: $9c^2 - 6cd + d^2$

**Ex**: $-3y^2 + 36y - 108$      **Ex**: $-2x^2 - 16x - 32$      **Ex:** $h^2 + 4h + 4$

**Ex:** $2y^2 - 20y + 50$         **Ex:** $3x^2 + 6xy + 3y^2$

**Solve:**

**Ex:** $x^2 + \dfrac{2}{3}x + \dfrac{1}{9} = 0$

**Ex:** $x^2 - 5x + \dfrac{25}{4} = 0$

**Ex:** $a^2 + 6a + 9 = 0$

**Ex**: $w^2 - 14w = -49$

**Ex**: $n^2 - 81 = 0$

**Ex**: $x^2 = 49$

**Ex**: A window washer drops a wet sponge from a height of 64 feet. After how many seconds does the sponge land on the ground?

**Ex**: A rock is dropped from a riverbank that is 4 feet above the surface of the river. After how many seconds does the rock hit the water?