**Converting Quadratic Equations between Standard and Intercept Form**

**Standard Form: y = ax2 + bx + c Intercept Form: y = a (x-p)(x-q)**

**Convert from Standard Form to Intercept Form**

**y = ax2 + bx + c y = a (x-p)(x-q)**

**Example 1:**

**y = 2x2 + 10x – 28**

**y =** Factor out the GCF of the coefficients to find a

**y =** Factor the trinomial using Perfect Square Trinomial or AC

y =

**Example 2:**

**y = x2 – 4x - 96**

**y =** Factor out the GCF of the coefficients to find a

**y =** Factor the trinomial using Perfect Square Trinomial or AC

y =

**Practice: Convert the following quadratics from standard form to intercept form.**

1. f(x) = 2x2 + 16x + 28 2. f(x) = -2x2 – 12x - 18 3. f(x) = -x2 – 10x + 24

**Convert from Intercept Form to Standard Form**

**y = a (x-p)(x-q) y = ax2 + bx + c**

**Example 1:**

**y = 2(x + 3)(x – 1)**

**y =** FOIL the intercept form and combine like terms

**y =** Distribute a into the trinomial

y =

**Example 2:**

**y = 3(x – 6)(x – 2)**

**y =** FOIL the intercept form and combine like terms

**y =** Distribute a into the trinomial

y =

**Practice: Convert the following quadratics from intercept form to standard form.**

1. f(x) = 3(x – 4)(x + 2) **2.** f(x) = (x + 3)(x – 5) 3. f(x) = 2(x – 7)(x + 2)