

Warm -Up
3/7

$$m^2 - n^2 = (m + n)(m - n)$$

Factor Completely

$$81 - y^4 = (9 + y^2)(9 - y^2)$$

$$\begin{aligned} m &= 9 \\ n &= y^2 \end{aligned}$$

$$-y^4 + 81 = -1(y^4 - 81)$$

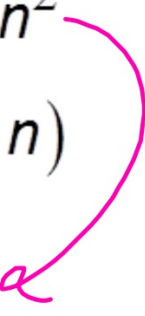
$$-1(y^2 + 9)(y^2 - 9)$$

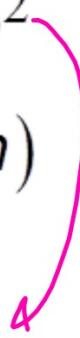
The Perfect Square Trinomial

Procedure – Factoring Polynomials

1. Factor any G.C.F.
2. Choose the appropriate procedure.
 - a. Binomial – Difference of two squares.
 - b. **Trinomial – Try special forms for a few seconds** and if you can't find a factored form shift to the AC method.
 - c. Four terms – Factor by grouping.
3. Return to step 1 with any factor that isn't prime.

The Perfect Square Trinomial

$$\begin{aligned} m^2 + 2mn + n^2 \\ (m+n)(m+n) \\ (m+n)^2 \end{aligned}$$


$$\begin{aligned} m^2 - 2mn + n^2 \\ (m-n)(m-n) \\ (m-n)^2 \end{aligned}$$




Factor Completely

$$x^2 + 6x + 9$$

$$(x)^2 + 6x + (3)^2$$

$$x^2 + 2(3)x + 3^2$$

$$(x+3)^2$$

$$m = x$$

$$n = 3$$

$$m^2 + 2mn + n^2$$

$$(m+n)^2$$



$$m = w$$
$$n = 8$$

Factor Completely

$$w^2 - 16w + 64$$

$$w^2 - 16w + 8^2$$

$$w - 2(8)w + 8^2$$

$$(w - 8)^2$$

$$m^2 - 2mn + n^2$$
$$(m - n)^2$$



Factor Completely $(m+n)^2 = m^2 + 2mn + n^2$

$$4r^2 + 4r + 1$$

$$(2r)^2 + 4r + (1)^2$$
$$m^2 + 2mn + n^2$$
$$(2r)^2 + 2(2r)(1) + (1)^2$$

$$(2r+1)^2$$

Factor Completely $(m - n)^2 = m^2 - 2mn + n^2$

$$\sqrt{4p^2} - 28p + \sqrt{49}$$

$$(2p)^2 - 2(2p)(7) + (7)^2$$

$$(2p - 7)^2$$

Homework (due Tue, 3/12)
p.96 (23 - 30)

