

DAY 2

Warm Up Factor the trinomial.

1) $x^2 + 7x - 18$

$$\begin{array}{ccc} & -18 & \\ -2 & \times & 9 \\ & 7 & \end{array}$$

$$(x-2)(x+9)$$

2) $x^2 - 4 + 3x$

$$x^2 + 3x - 4$$

$$(x+4)(x-1)$$

$$\begin{array}{ccc} & -4 & \\ 4 & \times & -1 \\ & 3 & \end{array}$$

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

Prime

$$\begin{array}{ccc} & -6 & \\ & \times & \\ & 3 & \end{array}$$

$$\begin{array}{l} 1,6 \\ 2,3 \end{array}$$

Homework Questions?

"9.8" wkst

Example 3: Using the Discriminant

Tell whether the trinomial can be factored into linear factors with integer coefficients.

Discriminant $\rightarrow b^2 - 4ac$

a) $x^2 - 8x + 12$

$a=1, b=-8, c=12$

$b^2 - 4ac$

$(-8)^2 - 4(1)(12)$

$= 64 - 48$

$= 16$ ← perfect square, so can be factored

~~$\begin{array}{cc} 12 & \\ -2 & -6 \\ & -8 \end{array}$~~

b) $x^2 + 9x - 1$

$a=1, b=9, c=-1$

$b^2 - 4ac$

$9^2 - 4(1)(-1)$

$= 81 + 4$

$= 85$ ← Not perfect square

~~$\begin{array}{c} -1 \\ 9 \end{array}$~~

Prime

10.5 Day 2 Homework

p.607 #5-26, 42-47