

AGENDA

- 1) Take out HW to be checked
(*"518 Quadratic Graphing" worksheet*)
- 2) DO NOW
- 3) HW questions??
- 4) Factoring Matching Practice
- In partners
- 4) Recognize tricky problems

HW: "Factoring and Graphing Practice" worksheet

DO NOW

Method 1)

Look for the Greatest Common Factor (GCF) to "un-distribute"

1) $y = x^2 - x$

2) $y = 2x^2 - 4x$

3) $y = -3x^2 - 6x - 9$

Method 2) Quadratic Trinomials : $ax^2 + bx + c$ (when $a = 1$)

***Target Product:** 2 numbers that **MULTIPLY** to c

***Target Sum:** 2 numbers that **ADD** to b

- | | | | | | |
|---------------------|---------------------|----------------------|----------------------|----------------------|----------|
| 1) $s^2 + 7s + 10$ | A) $(s + 5)(s + 2)$ | B) $(s + 10)(s + 7)$ | C) $(s + 10)(s - 1)$ | D) $(s - 5)(s - 2)$ | 1) _____ |
| 2) $u^2 - 11u + 28$ | A) $(u + 4)(u - 7)$ | B) $(u + 4)(u + 7)$ | C) $(u - 4)(u + 7)$ | D) $(u - 4)(u - 7)$ | 2) _____ |
| 3) $x^2 - x - 42$ | A) $(x + 7)(x - 6)$ | B) Prime | C) $(x + 6)(x - 7)$ | D) $(x + 1)(x - 42)$ | 3) _____ |
| 4) $x^2 + 2x - 15$ | A) $(x + 5)(x - 3)$ | B) $(x - 5)(x + 3)$ | C) Prime | D) $(x - 5)(x + 1)$ | 4) _____ |
| 5) $x^2 - 3x - 40$ | A) $(x + 5)(x - 8)$ | B) Prime | C) $(x - 5)(x + 1)$ | D) $(x - 5)(x + 8)$ | 5) _____ |

Recognize tricky problems

$$x^2 - 10x + 25$$

$$x^2 + 10x + 25$$

$$x^2 - 25$$

HW: "Factoring and Graphing Practice" worksheet

HW: Factoring and Graphing Practice

Solve each equation by factoring.

1) $b^2 + b - 30 = 0$

$(b+6)(b-5) = 0$
 $b+6 = 0$ or $b-5 = 0$
 $b = -6$ or $b = 5$

2) $x^2 + 12x + 27 = 0$

3) $n^2 + 6n - 7 = 0$

4) $n^2 - 2n - 99 = 0$

5) $a^2 - 144 = 0$

6) $p^2 + 13p + 30 = 0$

7) $x^2 - 12x + 20 = 0$

8) $n^2 - 121 = 0$

Plot #2 and #3 on the graphs below:

- a) Indicate the zeros
- b) Draw in the axis of symmetry
- c) Use the x-value of A.O.S. to solve for vertex
- d) mark the y-intercept

1)

$b^2 + b - 30 = y$ ← y-intercept
 zeros: $x = -6$ or 5
 AOS: $\frac{-6+5}{2} = \frac{-1}{2} = x$
 vertex
 $y = (-\frac{1}{2} + 6)(-\frac{1}{2} - 5) = (+5.5)(-5.5) = -30.25$
 $(-\frac{1}{2}, -30.25)$

2)

3)

