

Name: _____

Date: _____

Notes

Algebra Section 9.5

Pages 583-589

Goal: “You will factor trinomials of the form $x^2 + bx + c$ ”



Factoring Trinomials:

Factoring a trinomial is essentially _____.

Guess and Check:

Factor $x^2 + 11x + 18$

Factor $x^2 + 8x + 12$

Factor $x^2 + 5x + 4$

You are looking for _____ of 4 that _____ to be 5.

_____ x _____ = 4

_____ + _____ = 5

so (+) (+) = $x^2 + 5x + 4$

$x^2 + bx + c = (x + p)(x + q)$

Factor each trinomial:

Ex: $x^2 + 3x + 2$

Ex: $a^2 + 7a + 10$

Ex: $t^2 + 9t + 14$

Ex: $x^2 + 13x + 12$

Ex: $t^2 + t - 20$

Ex: $n^2 - 6n + 8$

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

Ex: $n^2 - 5n + 6$

Ex: $y^2 + 2y - 15$

Ex: $w^2 + 6w - 16$

Solve:

Ex: $x^2 + 3x - 18 = 0$

Ex: $s^2 - 2s = 24$

Ex: $x^2 - 3x = 28$

Factor completely.

Ex: $-x^2 - 6x - 5$

Ex: $-x^2 - 4x - 3$

Ex: $-x^2 - 3x + 70$

Ex: $-x^2 + 17x - 72$

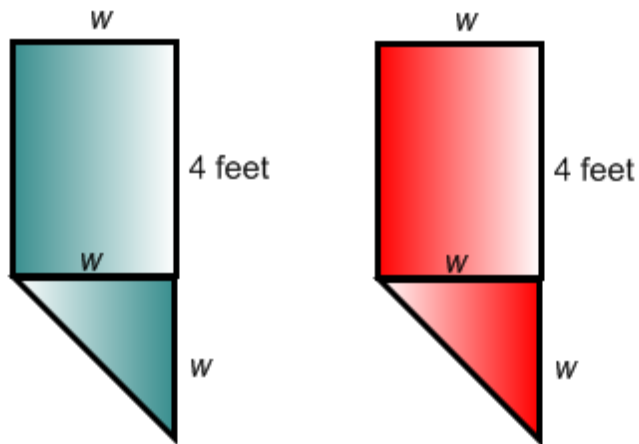
Ex: $2a^2 + 12a + 16$

Ex: $3x^2 + 24x - 144$

Ex: $4x^2 - 40x + 84$

Ex: $-2x^2 - 10x - 12$

Ex: You are making banners to hang during school spirit week. Each banner requires 16.5 square feet of felt and will be cut as shown. Find the width of each banner.



Ex: You are designing a team flag. The shaded region will have the team name. The entire flag requires 117 square inches of fabric. Find the width.

