

Name: _____

Date: _____

Pre-Calculus 11 HW 1.1 Factoring Trinomials

1. Given each pair of binomials, expand and simplify:

a. $(x - 3)(x + 4)$

b. $(x + 11)(x - 9)$

c. $(2x + 3)(3x - 1)$

e. $(7x - 3)(4x + 2)$

f. $(10x - 3)(4x - 2)$

g. $(8x - 3)(3x - 8)$

2. Given each expression, find the missing value in the box:

a. $x^2 - 11x - 12 = (x - \boxed{?})(x + 1)$

b. $x^2 - 29x + 120 = (x - \boxed{?})(x - 5)$

c. $5x^2 + 6x + 1 = (5x + \boxed{?})(x + 1)$

d. $2x^2 - 23x + 11 = (2x - \boxed{?})(x - 11)$

3. Factor each of the following expressions. Show all your steps and work:

a. $x^2 + 7x + 6$

b. $x^2 + 25x + 24$

c. $x^2 + 10x + 21$

d. $x^2 - 10x + 24$

e. $x^2 + 3x - 40$

f. $4x^2 + 9x + 2$

g. $2x^2 + 5x + 2$

h. $2x^2 - 11x + 15$

i) $21x^2 + 17x - 30$

j) $2x^2 - 7x + 5$

k) $5x^2 - 13x - 6$

l) $7x^2 + 9x - 10$

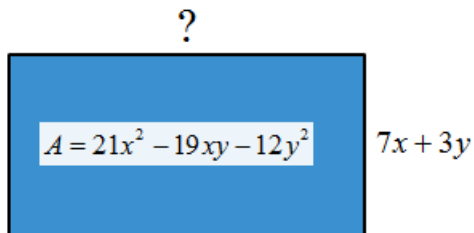
m) $21 + 26x - 15x^2$

n) $2x^2 - 9xy - 45y^2$

o) $5x^4 - 9x^2 - 2$

p) $6 - 7x^2 + 2x^4$

4. The area of a rectangle is given by the expression: $21x^2 - 19xy - 12y^2$ and the width is $7x + 3y$. Find the length of the rectangle:



5. The area of a triangle is given by the expression: $14x^2 + 20x - 1.5$ and the width is $14x - 1$. Find the length of the rectangle:

