

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Pre-Calculus 11 HW 4a 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)  $7x^2 + 9x - 10$

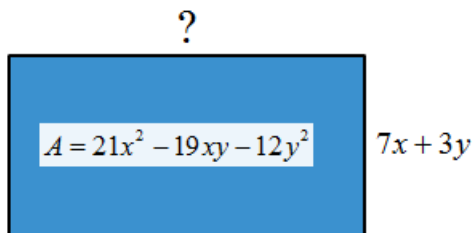
m)  $21 + 26x - 15x^2$

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:

