Bates TECHNICAL COLLEGE **Student Tutoring Center**

Math

Factoring Trinomials Using the "AC" Method

The "AC" Method (Factoring Trinomials)

The "AC" method or factoring by grouping is a technique used to factor trinomials. A trinomial is a mathematical expression that consists of three terms ($ax^2 + bx + c$).

Example of "AC" method:

	a b c		
1.	$6x^2 + 7x + 2$		
2.	a(c) = __	b = __	First, find the product of **a** and **c.**
	6(2) =12	b = 7	
3.	12 = 12(1)	$12 + 1 \neq 7$	A. List all the products that equal
	12 = 6(2)	$6 + 2 \neq 7$	$(a \cdot c)$.
	12 = 4(3)	**4 + 3 = 7**	B. Check to see if numbers listed equal b, when added.
4.	$6x^2 + 3x + 4x + 2$		Rewrite trinomial with new numbers taking the middle term's place. 7x is now 3x + 4x.
5.	$(6x^2 + 3x) + (4x+2)$		Isolate similar terms and factor out
	$3x(2x + 1) + 2(2x + 1)$		the greatest common factor (GCF).
6.	$(3x + 2)(2x+1)$		Factor out 2x + 1 and rewrite.