

Factoring Trinomials with Leading Coefficient Greater than 1

Objective: I CAN . . . factor quadratic trinomials of the form $ax^2 + bx - c$

* 1st ALWAYS LOOK TO FACTOR OUT GREATEST COMMON FACTOR *

1. $2x^2 - 5x - 3$ A.C. = -6

	X	-3
2x	$2x^2$	$-6x$
1	$1x$	-3

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

2. $5x^2 - 4x - 12$ -60
-10.6

	X	-2
5x	$5x^2$	$-10x$
6	$6x$	-12

$(x-2)(5x+6)$

3. $3x^2 + 16x + 21$ A.C. = 63
9.7

	X	3
3x	$3x^2$	$9x$
7	$7x$	21

$(x+3)(3x+7)$

4. $7x^2 - 9x + 2$ A.C. = 14
-2.7

	7x	-2
X	$7x^2$	$-2x$
-1	$-7x$	2

$(7x-2)(x-1)$

5. $5x^2 + 13x - 6$ A.C. = -30
+15. -2

	X	3
5x	$5x^2$	$15x$
-2	$-2x$	-6

$(x+3)(5x-2)$

6. $16x^2 - 20x - 62$ A.C. = 248

$2(8x^2 - 10x - 31)$

$8x^2$	
	-31

Not factorable

Factoring Special Products

Objective: I CAN . . . factor special products.

* 1st ALWAYS LOOK TO FACTOR OUT GREATEST COMMON FACTOR *

1. $m^2 - 4$

$(m-2)(m+2)$

2. $49x^2 - 81$

$(7x-9)(7x+9)$

3. $25x^2 - 16$

$(5x-4)(5x+4)$

4. $16 - x^2 =$

$(4-x)(4+x)$

5. $y^2 - 1$

$(y-1)(y+1)$

6. $100r^2 - 9$

$(10r-3)(10r+3)$

7. $27x^2 - 12$

$3(9x^2 - 4)$
 $3(3x-2)(3x+2)$

8. $50 - 98x^2$

$2(25 - 49x^2)$
 $2(5-7x)(5+7x)$

9. $36 - x^2$

$(6-x)(6+x)$