Alg2T Warm Up Ch 4Day 1

For all real numbers a and b, $(3a+2b)^2 = ?$

F. $6a^2b^2$
G. $6a^2 + 4b^2$
H. $9a^2 + 4b^2$
J. $9a^2 + 6ab + 2b^2$
K. $9a^2 + 12ab + 4b^2$

$(3a+2b)(3a+2b)$

$9a^2 + 6ab + 6ab + 4b^2$

$(3x + 2)(5x - 1)$ is equivalent to:

A. $20x^2$
B. $8x + 1$
C. $15x^2 - 2$
D. $8x^2 + 4x + 1$
E. $15x^2 + 7x - 2$

Homework Check->

http://www.youtube.com/watch?v=Xs9aGVUZ3YA&sns=em

Chapter 4
Quadratic Functions
(4.3-4.4) FACTORING!!!

I. Factoring a=1 (prerequisite sheet)

Examples

1.) $x^2 + 3x + 2 = 0$

A M

$(x+2)(x+1)$ Factors

$x+2=0 \quad x+1=0$

$x=-2 \quad x=-1$ Solving

II. Factoring a trinomial a ≠1

Examples

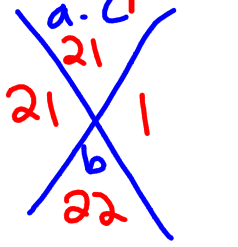
1.) $3x^2+22x+7=$

ax^2+bx+c

$(3x^2+21x)+(1x+7)$

$3x(x+7)+1(x+7)$

$(x+7)(3x+1)$



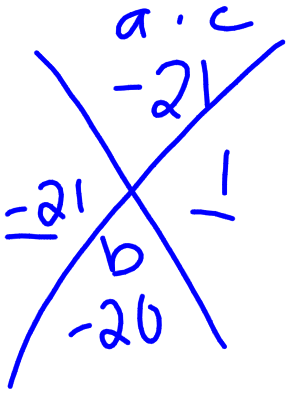
2.)

$7x^2-20x-3$

$(7x^2-21x)(+1x-3)$

$7x(x-3)+1(x-3)$

$(x-3)(7x+1)$



II. Factoring a trinomial a ≠1

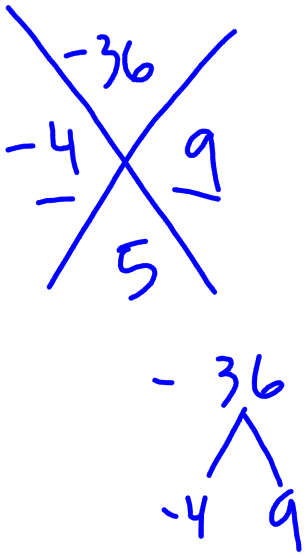
Examples

3.) $3x^2 + 5x - 12$

$(3x^2 - 4x)(9x - 12)$

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

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



4.) $4x^2 + 12x + 5$

Steps to Factoring

$4x^2+12x+5$

20
1
1 20
2 10
4 5

1) Draw and fill in x. ✓

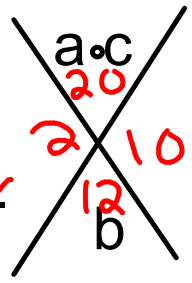
2) Find the factors of a•c. ✓

3) Find what factors add ✓

to get b and multiply to get a c.

4) Factor by grouping.

5) Identify factors.



$(4x^2+2x)(10x+5)$

$2x(2x+1)+5(2x+1)$

$(2x+1)(2x+5)$

Riddle

A murder is condemned to death. He has to choose between 3 rooms. The first is full of raging fires, the second is full of assassins with loaded guns, and the third is full of lions that havent eaten in 3 years. Which room is safest for him?

*Let's Go Outside!

III. Difference of Squares

Examples

$$a^2 - b^2 = (a-b)(a+b)$$

$ax^2 + bx + c$

$\sqrt{x^2}$

1.) $x^2 - 4 = (x-2)(x+2)$

2.) $9x^2 - 100 = (3x-10)(3x+10)$

3.) $1 - 4x^2 = (1+2x)(1-2x)$

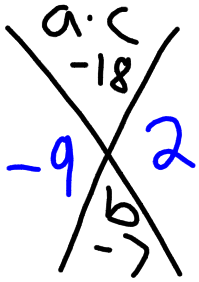
IV. Factor out GCF first!!!

Examples

1.) $2x^2+14x+24 = 2(x^2+7x+12)$

$2(x+3)(x+4)$

2.) $12x^2-28x-24 = 4(3x^2-7x-6)$



$(3x^2-9x)+(2x-6)$

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

$4 \neq 0 \quad (3x+2)(x-3)=0$

IV. Factor out GCF first!!!

Examples

ax^2+bx+c

3.) $-16x^2+12x$

$4x(-4x+3)$ Factor

4.) $12x^2-27$

$3(4x^2-9)$

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

And the homework: Unit Plan Day 1

Test Corrections

-> Separate Sheet of Paper

-> Summarize original problem

-> Rework to get correct answer

Steps to a Retake:

1) Make test corrections

2) Retake Assignment

3) Sign Up to Retake

4) Conference with me about mistakes.