Agenda for Today 2/2/18

1. Zero Product Property
2. Unit 3A Quiz 1

ax^2+bx+c – Big X
X-method.

ax^2-c difference of squares.

$(x\quad)(x\quad)$

$(\quad)(\quad)=0$

Objectives 2/2/18

- I can solve quadratic equations by factoring.

https://www.youtube.com/watch?v=g6RnAY_VkMs

ZERO PRODUCT PROPERTY INB

Statement

What it says: If ab=0, then a=0 or b=0.
What it means: If we have a product of two algebraic expressions equal to zero, one of those expressions is equal to 0. So if (x+5)(x-3)=0, then x+5=0 or x-3=0, so x= -5 or 3
-5 -5 +3 +3

Solving by Factoring & Using ZPP

- ✓ **Get all terms together** on one side so that the other side is 0 (hence the name zpp).
- ✓ **Factor completely.**
- ✓ **Set each factor** = 0 (hence the name zpp).
- ✓ **List** zeros or solutions.

Examples

1. $m^2 + 7m - 18 = 0$

-18
9 -2
7

$(m+9)(m-2)=0$
$m+9=0$ $m-2=0$
$m=-9$ or $m=2$

2. $z^2 - 11z = -24$

+24 +24
$z^2-11z+24=0$
24
-8 -3
-11
$(z-8)(z-3)=0$
$z-8=0$ or $z-3=0$
$z=8$ or 3

3. $2v^2 + v - 21 = 0$

$a \cdot c = -42$ $b = 1$
-42
-6 7
1

	$2v$	$+7$
v	$2v^2$	$7v$
-3	$-6v$	-21

$(2v+7)(v-3)=0$
$2v+7=0$ $v-3=0$
-7 -7 $+3$ $+3$
$\frac{2v}{2}=\frac{-7}{2}$
$v=-7/2$ OR $v=3$
$v=$ or -3.5

-42
1 -42
-1 42
2 -21
-2 21
3 -14
-3 14
-6 7
6 -7

4. $6v^2 = -30v - 36$

$\frac{6v^2}{6}+\frac{30v}{6}+\frac{36}{6}=0$
$6(v^2+5v+6)=0$
6
2 3
5
$6(v+2)(v+3)=0$
$v=0$
$v+2=0$, $v=-2$
$v+3=0$; $v=-3$

Guided Practice 2/2/18

Day 4 – Solving when A not 1
Practice Assignment

Name: _

Solve the quadratic equations:

1. $2x^2 - 11x - 21 = 0$

$ac = -42$ $b = -11$

-42, 3, -14, -11

	x	-7
$2x$	$2x^2$	$-14x$
3	$3x$	-21

$2x + 3 = 0$
$-3 \quad -3$
$2x = -3$

Factored Form: $(x-7)(2x+3)=0$

Zeros: $x = 7$ or $-3/2$ or -1.5

2. $2x^2 - 7x - 4 = 0$

$ac = -8$ $b = -7$

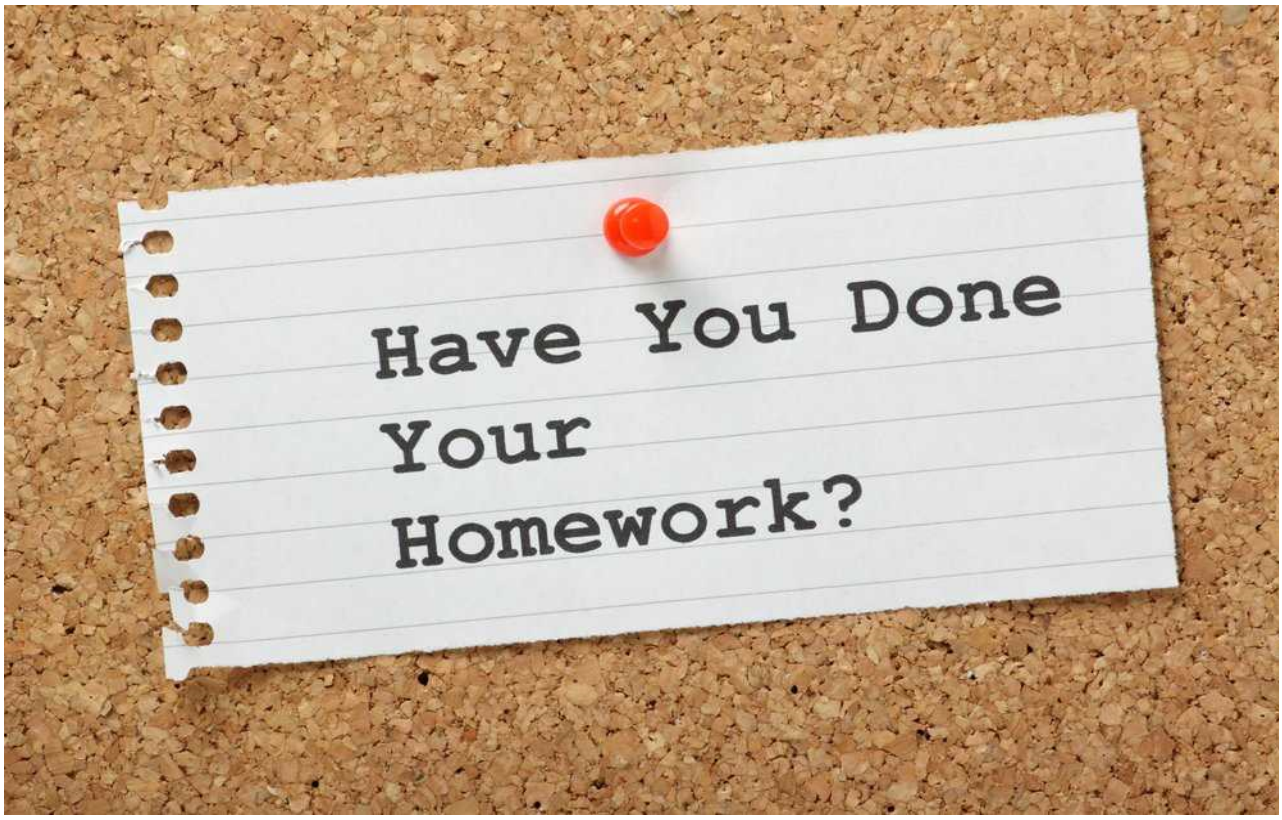
-8, 1, -8, -7

	x	-4
$2x$	$2x^2$	$-8x$
1	x	-4

Factored Form: $(x-4)(2x+1)=0$

Zeros: $x = 4$ or $-1/2$

Turn in your home-work on factoring!



GCF Review for Quiz 2/2/18

Find the GCF of the following Polynomial Expression.

$$-8x^5 - 36x^4 + 16x^3 + 24x^2 - 12x$$

$-4x$ $-4x$ $-4x$ $-4x$ $-4x$

$$-4x(2x^4 + 9x^3 - 4x^2 - 6x + 3)$$

Review of Difference of Squares

a. $x^2 - 36 = (x+6)(x-6)$

$a = x$

$b = 6$

b. $x^2 - 16 = (x+4)(x-4)$

c. $4x^2 - 25$

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

Essential Question 2/2/18

How can I demonstrate mastery of Unit 3A standards on Factoring Quadratic Expressions?

Objective:

- Take the Unit 3A Test.

Unit 3A Test 2/2/18

1. Answer all 5 questions and show all your work as appropriate to earn full credit. # 5 is a bonus!
2. Do your very best! You can do this!!!

Post-It

Check!!!

Factor the following difference of squares

$9x^2 - 100$

a = 3x, b = 10

so the difference of squares factors into:

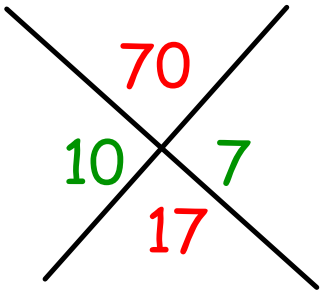
(3x + 10)(3x - 10)

Review Factoring a not 1 with GCF

1. $10m^2 + 34m + 28$

1st take out the gcf = 2

$2(5m^2 + 17m + 14)$ ac = 70, b = 17



	5m	+ 7
m	$5m^2$	7m
+2	10m	14

Your final answer should be written in factored form:

$2(5m + 7)(m + 2)$

You try the next 3 questions on your own!

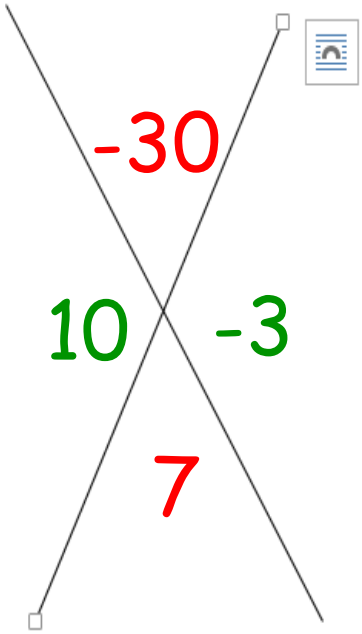
2. $14n^2 + 32n + 18$

3. $10n^2 + 18n + 8$

4. $25n^2 - 135n - 90$

Review Factoring a not 1 without GCF

5. $6x^2 + 7x - 5$ ac = -30, b = 7



	3x	+5
2x	$6x^2$	10x
-1	-3x	-5

Answer: (3x + 5)(2x - 1)

You try the next 2 questions on your own!

6. $7x^2 + 27x - 4$

7. $2x^2 - 19x + 24$

Attachments

Day 4 Quiz Review - Jeopardy.ppt