WARM-UP

Name _____ Per ___

Graph and then solve

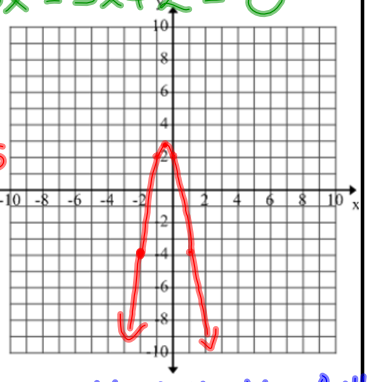
(round answers to 2 decimal places)

$-3x^2 - 3x = -2$

$+2 \quad +2$

$-3x^2 - 3x + 2 = 0$

x	y
-2	-4
-1	2
-.5	2.75
0	2
1	-4



Solution(s): $X = 1.46 \quad X = -0.46$

Factor Completely:

$\frac{2x^2}{2} - \frac{14x}{2} - \frac{16}{2}$ GCF=2

$2(x^2 - 7x - 8)$

	x	$+1$
x	x^2	$+1x$
-8	$-8x$	-8

$-7x$

Factors: $2(x-8)(x+1)$

$X = 1.457\ldots$

$X = -0.457\ldots$

5.2B Solving Quadratic Equations by Factoring: Part I

Section 5.2B

#1 – 2: Complete each table of information.

1)

Table of values: (vertex)

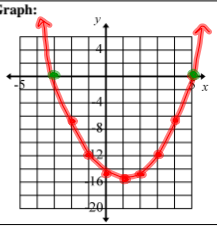
x	-2	-1	0	1	2	3	4	5
y	-7	-12	-15	-16	-15	-12	-7	0

Factored (intercept) form of the equation: $y = (x-5)(x+3)$

Solutions for the equation: $0 = (x-5)(x+3)$

$X = +5 \quad X = -3$

Graph:



x-intercept(s): $(-3,0)$ $(5,0)$

$X - 5 = 0$
$+5 \quad +5$
$X = 5$

$X + 3 = 0$
$-3 \quad -3$
$X = -3$

Verify the solution(s):

check $x = +5$

$0 = (5-5)(5+3)$

$0 = 0$ ✓

check $x = -3$

$0 = (-3-5)(-3+3)$

$0 = 0$ ✓

2)

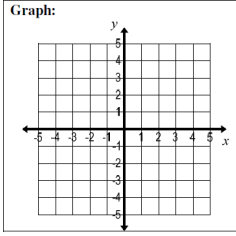
Table of values:

x								
y								

Factored (intercept) form of the equation: $y = (x-1)(x-5)$

Solutions for the equation: $0 = (x-1)(x-5)$

Graph:



x-intercept(s):

Verify the solution(s):

3) Write two or more conjectures about the relationship of the information in the charts above.

#4 – 7: Write each equation in factored form and use it to find the *x*-intercepts for each quadratic equation, check your answers, and then match each equation with the graphs pictured.

4) $y = x^2 - 9$

$y = (x-3)(x+3)$

x-intercepts: $(3,0)$ $(-3,0)$

✓Check your answer(s): $(3)^2 - 9 = 0$ ✓ $(-3)^2 - 9 = 0$ ✓

Matches with graph A

5) $y = -x^2 + 4$

GCF $= -1$

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

x-intercepts: $(2,0)$ $(-2,0)$

✓ Check your answer (s):

Matches with graph B

6) $y = x^2 + 4x - 12$

$y = (x+6)(x-2)$

$x+6=0$, $-6 \quad -6$, $x = -6$

x-intercepts: $(-6,0)(2,0)$

✓Check your answer(s):

Matches with graph C

7) $y = -2x^2 + 4x + 6$

GCF $= -2$

$\frac{y}{-2} = \frac{-2x^2}{-2} + \frac{4x}{-2} + \frac{6}{-2}$

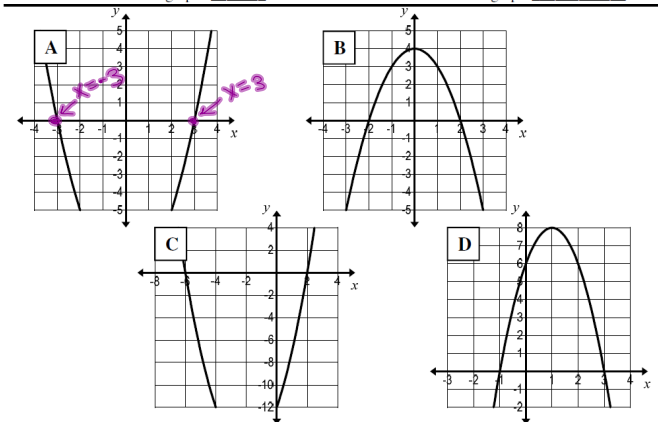
$y = -2(1x+1)(1x-3)$

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

x-intercepts: $(-1,0)(3,0)$

✓ Check your answer (s):

Matches with graph D



HOMEWORK:

1/26	5.2	I can solve quadratic equations by factoring	5.2B #1 – 17 odds (P-11)	* all for E.C.	☺	😐 ☹
			5.2B #10 – 17 (P-12)			
			5.2C #1 – 6 (P-13)		☺	😐 ☹
		I can simplify radical expressions	5.2D #1, 8 (P-15)		☺	😐 ☹
		I can solve quadratic equations using square roots to find *rational* solutions	5.2E #1 – 7 (P-19)		☺	😐 ☹

Name _____ Period _____

5.2B *Solve Quadratic Equations by Factoring: Part I*

#1 - 3: Solve for *x*.

1. $(x-4)(x+9)=0$

2. $(x-2)(3x-6)=0$

3. $(4x+3)(2x-5)=0$

#4 – 17: Factor the quadratic expression then solve the equation by factoring. Verify your solution(s).

4. $4x^2-36=0$

5. $5x^2-20=0$

6. $3x^2-9x=0$

✓Verify your solution(s):

✓ Verify your solution(s):

✓ Verify your solution(s):

7. $7x^2-28x=0$

8. $x^2+8x-9=0$

9. $x^2+7x+12=0$

✓Verify your solution(s):

✓ Verify your solution(s):

✓ Verify your solution(s):