Name: _____ Score: ____ out of 70

Folder Check Algebra Unit #7

Name on all pages. _____

Pages 1-2 Worksheet Lesson 1 _____

Pages 3-4 Notes Lesson 1 _____

Pages 5-6 Worksheet Lesson 2 _____

Pages 7-8 Notes Lesson 2 _____

Pages 9-10 Worksheet Lesson 3 _____

Pages 11-12 Notes Lesson 3 _____

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Pages 23-24 Notes Lesson 6 _____

Pages 25-26 Worksheet Lesson 7 _____

Pages 27-28 Notes Lesson 7 _____

Pages 29-30 Study Guide _____

Pages 31-32 Study Guide _____

Worksheet Policy

-0 All Questions Done

-1 More than Half Done

-2 Only Groupwork Q's

-3 Less than Half Done

-4 Blank/Absent

Notes Policy

-0 All boxes filled

-1 One Empty Box

-2 Two Empty Boxes

-3 Less than Half Done

-4 Blank/Absent

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Adding and Subtracting Polynomials

Objective: ***I CAN . . .*** *Add and subtract polynomials.*

Unit 7 Lesson 1

Remember: When we add or subtract, we can only add or subtract "like terms"

Adding Polynomials: *Combine like terms.*

1. $(-5x-2)+(-x+6)$

2. $(6x^2-x+3)+(-2x+x^2-7)$

3. $(-8x^3+x-9x^2+2)+(8x^2-2x+4)+(4x^2-1-3x^3)$

Subtracting Polynomials: *Distribute the (-), then combine like terms.*

4. $(-6x^3+5x-3)-(2x^3+4x^2-3x+1)$

5. $(4x^2-1)-(3x-2x^2)$

6. $(12x-8x^2+6)-(-8x^2-3x+4)$

Name _____ Date _____

Unit 7 Lesson 1

3-digit multiplication : Box Method

Work out the answers to these multiplication questions using the box method.

445 x 32 = 14,240

	400	40	5
30	12000	1200	150
2	800	80	10

12000
+ 1200
+ 150
+ 800
+ 80
+ 10
14,240

#7. 384 x 65 = _____

_____

#8. 336 x 98 = _____

_____

#9. 475 x 25 = _____

_____

#10

405 x 73 = _____

_____

#11

325 x 39 = _____

_____

Name: _____ Unit # 7 Lesson # 1

Activator

New Vocabulary (1 of 4)

New Vocabulary (2 of 4)

New Vocabulary (3 of 4)

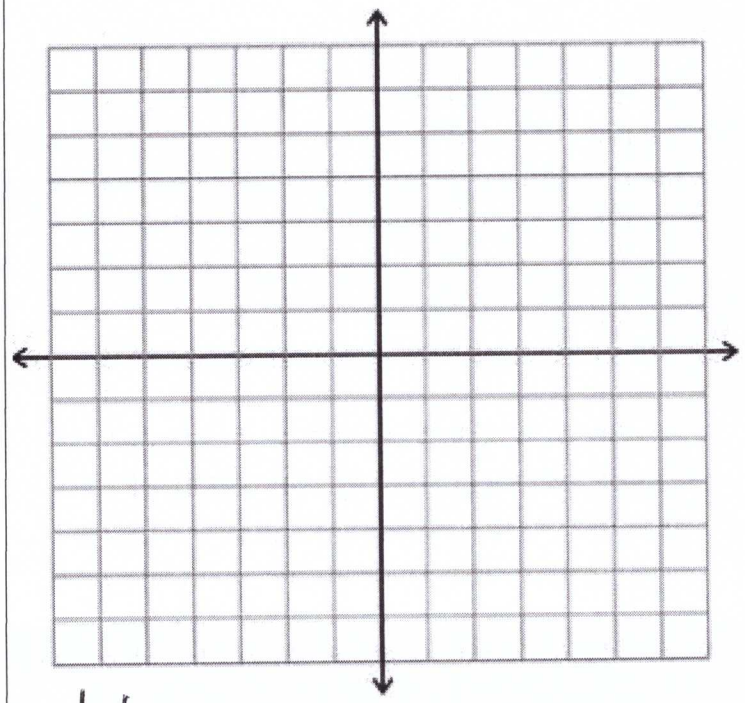
Unit # 7 Lesson # 1

Misconception (4 of 4)

Work Period

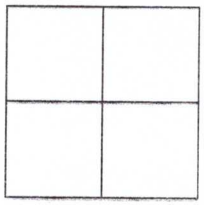
Exit Ticket

Extra Graph Paper



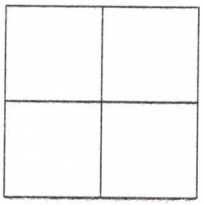
Name: _____ Unit 7 Lesson 2

1. $(x + 8)$ by $(x + 2)$



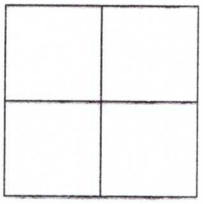
Area: _____

2. $(x + 5)$ by $(x + 6)$



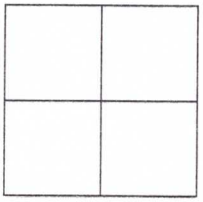
Area: _____

3. $(x + 3)$ by $(x - 4)$
(Be Careful!)



Area: _____

4. $(x - 5)$ by $(x + 1)$



Area: _____

5. $(x + 5)$ by $(x + 6)$

Area: _____

6. $(2x + 1)$ by $(x + 7)$
(Be Careful!)

Area: _____

7. $(x + 7)$ by $(x^2 - 4x + 5)$ [Not 2 by 2]

8. $(2x + 2)$ by $(x^2 + 7x + 10)$ [Not 2 by 2]

Distribute and Combine Like Terms with Polynomials Unit 7 Lesson 2

Objective: ***I CAN . . .*** *Distribute and combine like terms.*

Warm-Up Review:

9. $x^2 \cdot x^3$

10 $3x^3 \cdot 2x^3$

11. $-2x \cdot -x$

12. $2(3x-5)$

Distributive Property:

13. _____ each term in the first parentheses to each term in the second parentheses.

14. To do this, _____ each coefficient and _____ each exponent.

15. Combine _____, if possible.

16. Write answer in _____.

17. $-3x^2(6-2x)+4$

18. $5x(4x^2-2x+1)-8+x$

19. $3x(2x^2+4)+7$

20 $2x(5x-1)+3x+2$

Name: _____ Unit # 7 Lesson # 2

Activator

New Vocabulary (1 of 4)

New Vocabulary (2 of 4)

New Vocabulary (3 of 4)

Unit # 7 Lesson # 2

Misconception (4 of 4)

Work Period

Exit Ticket

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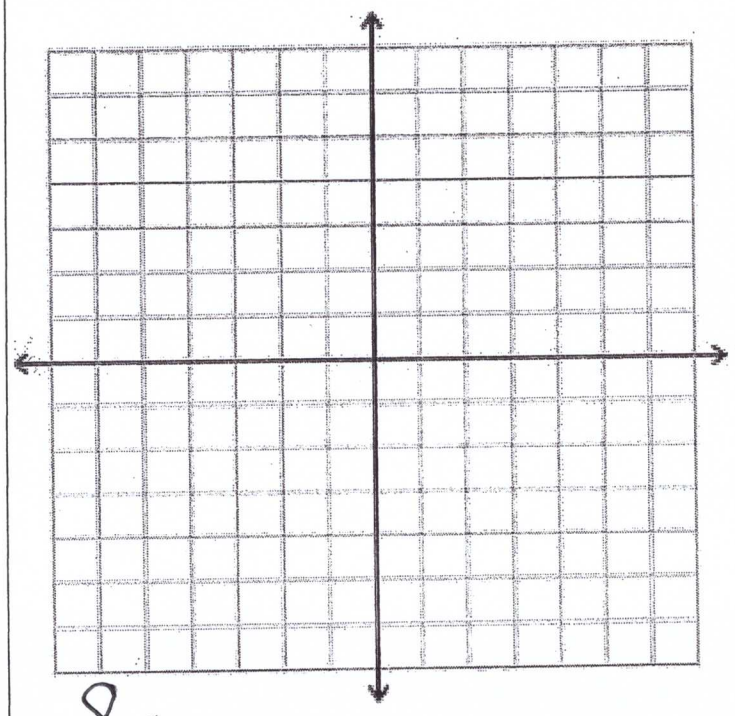


Name: _____

Write the Quadratic Equation Given Roots

Unit 7.3

Directions: Write the quadratic equation in Standard Form using the given roots.

1) Roots: 4 and 7

zero's 4 and 7

Roots are the same as _____.

Roots can be found on the _ Axis.

(2) Roots: −1 and 6 sign switch

factors → $y = (x+1)(x-6)$

	x	+1
x	x^2	+1x
-6	-6x	-6

$y = x^2 + 1x - 6x - 6$

$y = x^2 - 5x - 6$

3) Roots: −3 and −5

zeros -3 and -5

4) Roots: 8 and −2

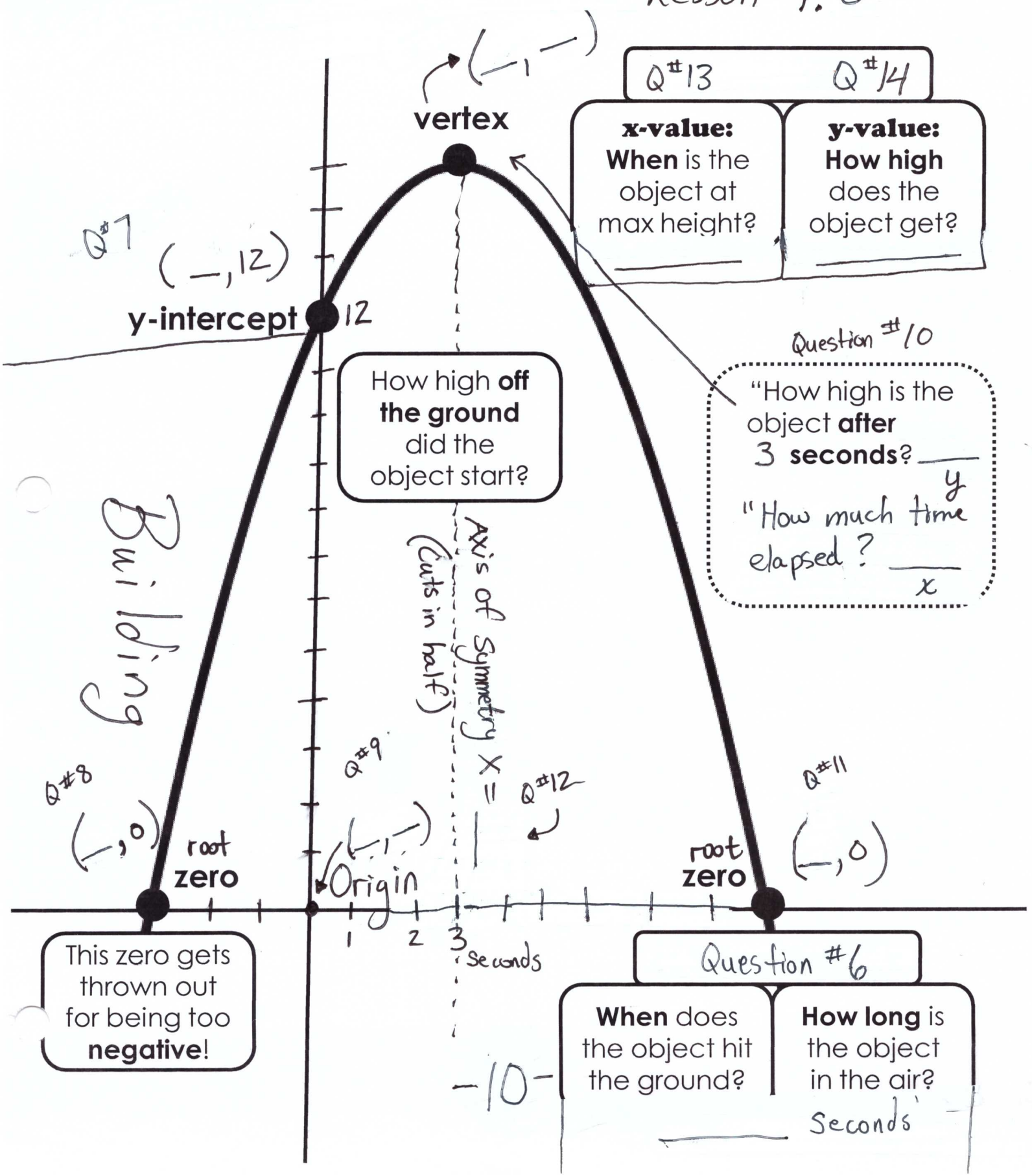
zeros 8 and -2

5) Roots: 2 and 10

zeros 2 and 10

Quadratic Keywords

Lesson 7.3



Name: _____ Unit # 7 Lesson # 3

Activator

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New Vocabulary (2 of 4)

New Vocabulary (3 of 4)

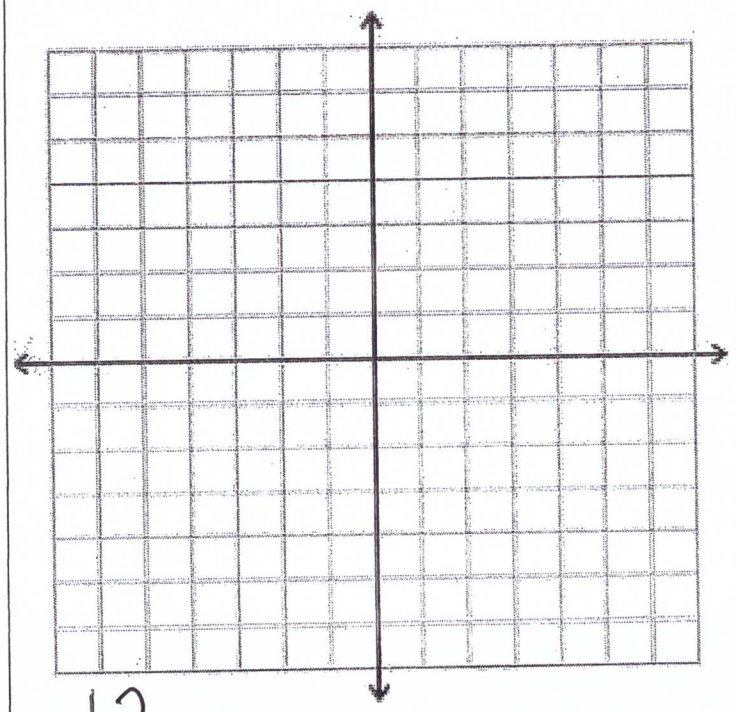
Unit # 7 Lesson # 3

Misconception (4 of 4)

Work Period

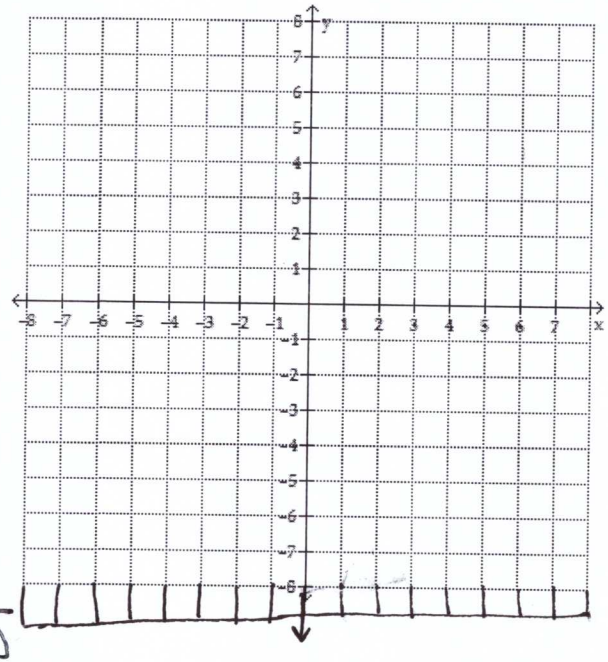
Exit Ticket

Extra Graph Paper

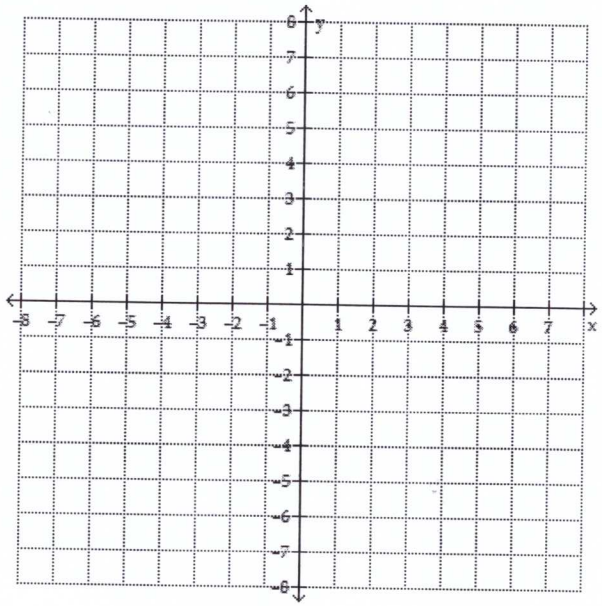


Assignment: NAme: _____ Lesson : _____

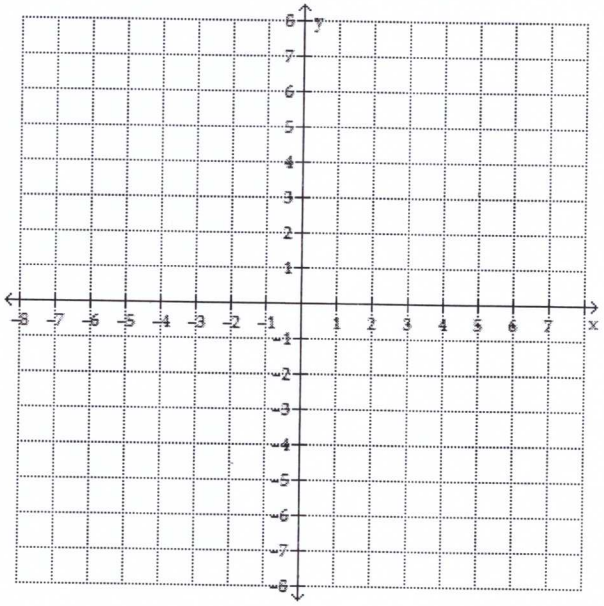
1A) Graph: $y = -3(x-2)^2 + 3$



2A) Graph: $y = \frac{1}{2}x^2 + 4x + 6$



3A) Graph: $y = (x-1)(x-3)$



1/3-1

1B) Vertex (__, __)

2B) Vertex (__, __)

3B) Vertex (__, __)

1C) Solutions: X = __ X = __

2C) Solutions x = __ x = __

3C) Solutions x = __ x = __

1D) Zero's (__, 0) (__, __)

2D) Zero's (__, 0) (__, 0)

3D) Zero's (__, 0) (__, 0)

1E) Maximum or Minimum

2E) Maximum or Minimum

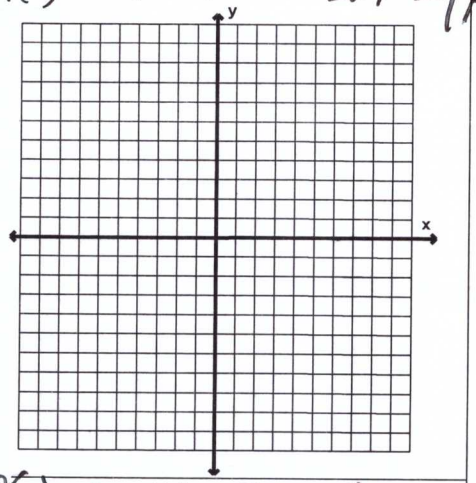
3E) Maximum or Minimum

Lesson 7.4

Parabola Name _____ Lesson 7.4

Sketch a graph of each equation that shows the vertex and at least two points to the left and right of the vertex.

$f(x) = -2(x+1)^2 + 2$ #4A



#4B

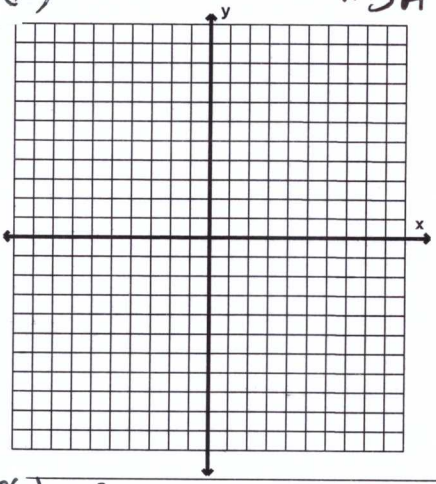
$f(x) = -2(x+1)^2 + 2$

$f(0) =$

#4C

x	f(x)
-1	

$f(x) = (x+1)(x-3)$ #5A



#5B

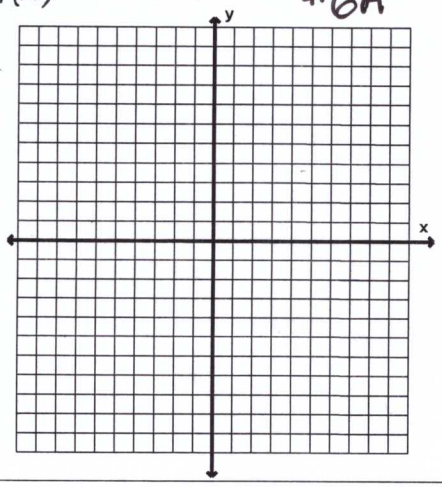
$f(x) = (x+1)(x-3)$

$f(1) =$

#5C

x	f(x)
1	

$f(x) = x^2 - 4x + 7$ #6A



#6B

$f(x) = x^2 - 4x + 7$

$f(2) =$

#6C

x	f(x)
2	

Name: _____ Unit # 7 Lesson # 4

Activator

New Vocabulary (1 of 4)

New Vocabulary (2 of 4)

New Vocabulary (3 of 4)

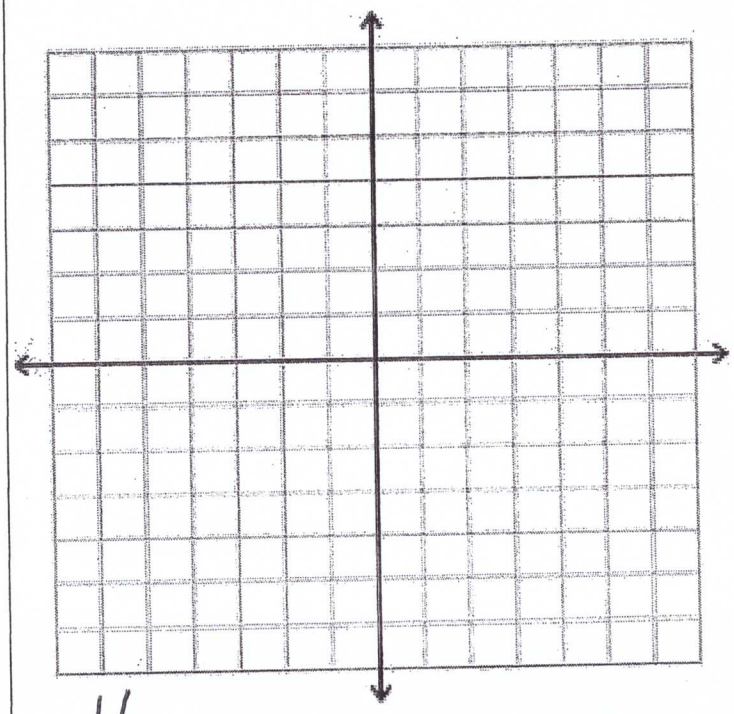
Unit # 7 Lesson # 4

Misconception (4 of 4)

Work Period

Exit Ticket

Extra Graph Paper



Radicals

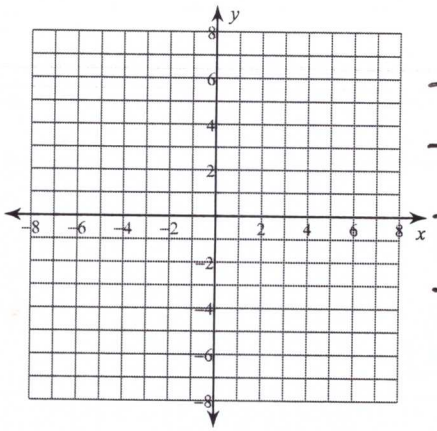
Name _____

- Graphing Radical Functions Examples

Unit 7.5

Sketch the graph of each function, and make a table.

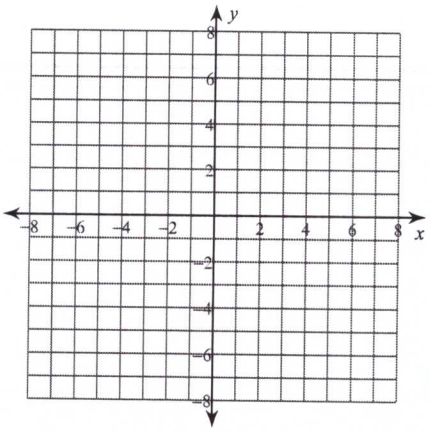
#10) $y = \sqrt{x}$



x	y
0	
1	
4	

No Shift

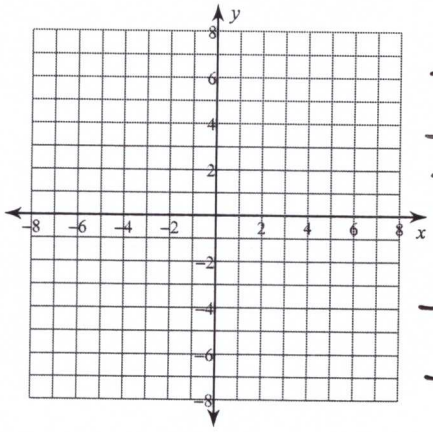
#11) $y = \sqrt{x-2}$



x	y
2	
3	
6	

Shift 2 right

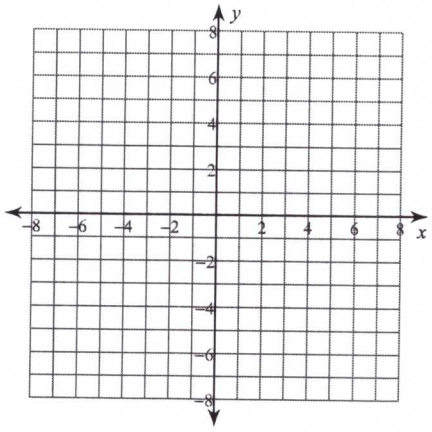
#12) $y = \sqrt{x+4}$



x	y
-4	
-3	
0	
5	

Shift 4 Left

#13) $y = \sqrt{x+6} - 3$



x	y
-6	
-5	
-2	
3	

Shift 6 Left
Shift 3 down

Lesson 7.5

#5

(A)

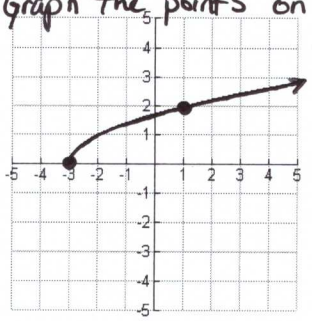
$f(x)=\sqrt{x+3}$

Shift _ Left from (0,0)

(B) Complete the table

x	f(x)
-3	
1	

(C) Graph the points on the table



#6

(A)

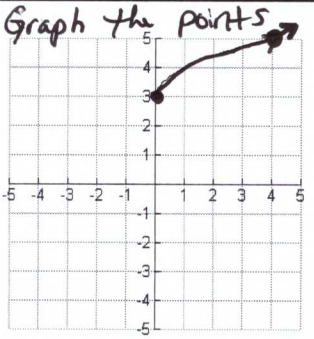
$f(x)=\sqrt{x}+3$

Shift _ up from (0,0)

(B) Complete the table

x	f(x)
0	
4	

(C) Graph the points



#7

(A)

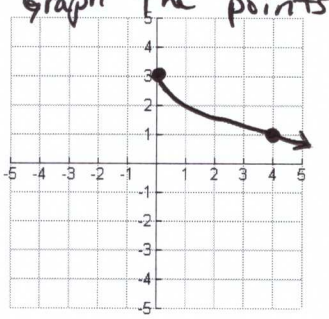
$f(x)=-\sqrt{x}+3$

Shift _ up from (0,0)

(B) Complete the table

x	f(x)
0	
4	

(C) Graph the points



#8

(A)

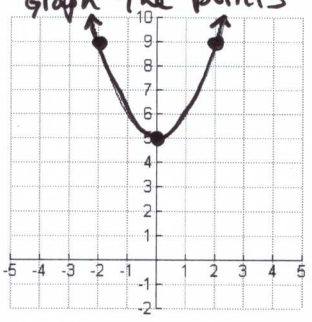
$f(x)=x^2+5$

Shift _ up from (0,0)

(B) Complete the table

x	f(x)
-2	
0	
2	

(C) Graph the points



#9

(A)

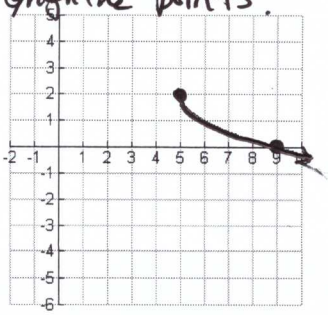
$f(x)=-\sqrt{x-5}+2$

Shift _ right _ up

(B) Complete the table

x	f(x)
5	
9	

(C) Graph the points.



Name: _____ Unit # 7 Lesson # 5

Activator

New Vocabulary (1 of 4)

New Vocabulary (2 of 4)

New Vocabulary (3 of 4)

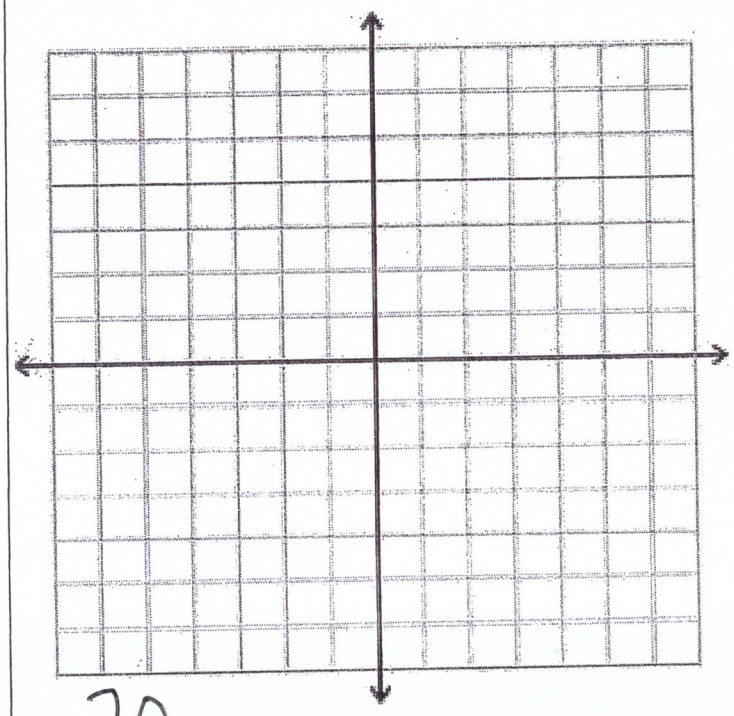
Unit # 7 Lesson # 5

Misconception (4 of 4)

Work Period

Exit Ticket

Extra Graph Paper



Name: _____ Unit and Lesson 7.6

Solving Equations with Square Roots/Squaring

Directions: Solve each equation by taking square roots.

1A) $x^2 = 25$

x	y
	0
	0

2A) $3x^2 = 108$

$\div 3 \quad \div 3$

$x^2 = 36$

$\sqrt{} \quad \sqrt{}$

$x = 6$ and $x = -6$

x	y
-6	0
6	0

3A) $x^2 + 6 = 6$

x	y
	0

4A) $x^2 - 8 = 41$

x	y
	0
	0

5A) $\frac{x^2}{4} = 16$

x	y
	0
	0

6A) $2x^2 - 2 = 6$

x	y
	0
	0

7A) $5x^2 + 9 = 14$

x	y
	0
	0

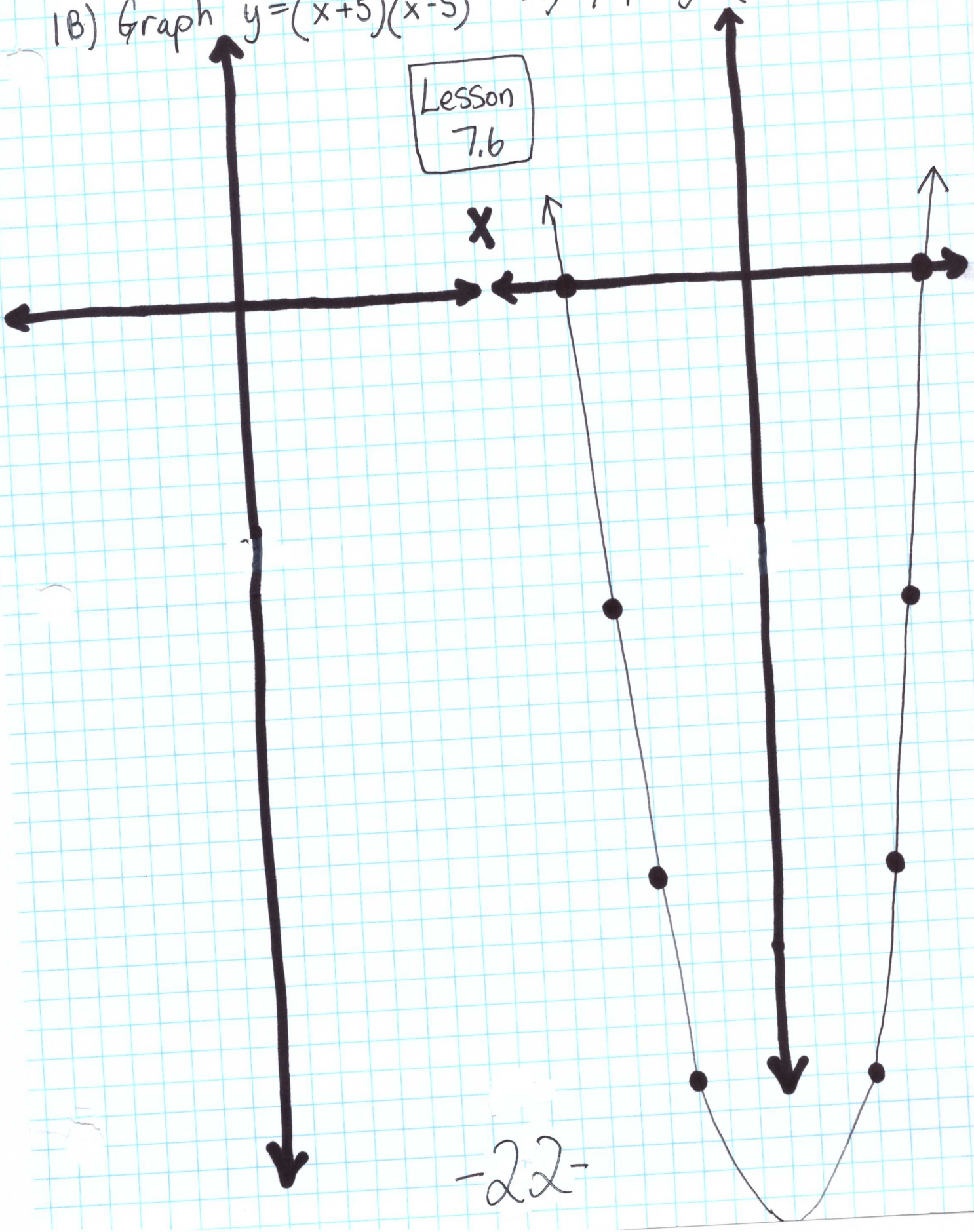
8A) $4b^2 + 2 = 326$

x	y
	0
	0

1B) Graph $y=(x+5)(x-5)$

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

Lesson 7.6



Name: _____ Unit # 7 Lesson # 6

Activator

New Vocabulary (1 of 4)

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New Vocabulary (3 of 4)

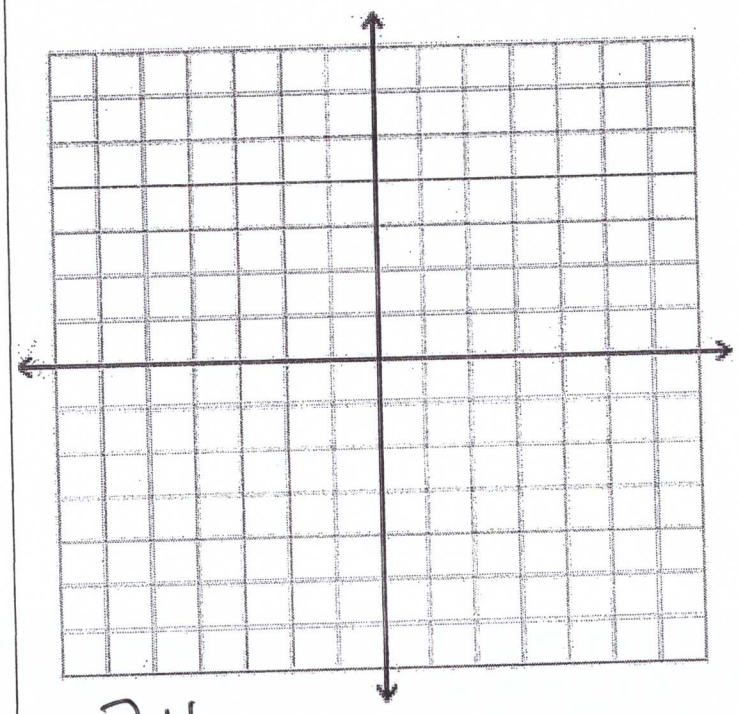
Unit # 7 Lesson # 6

Misconception (4 of 4)

Work Period

Exit Ticket

Extra Graph Paper

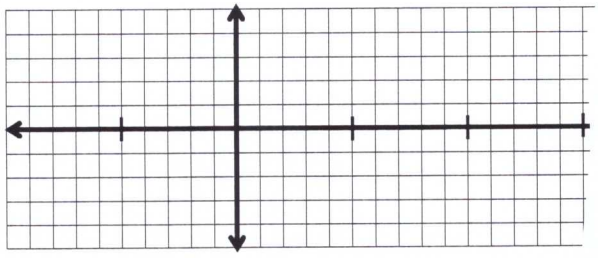


Name: Lesson 7.7

GRAPHING RADICAL FUNCTIONS

we will use the parent functions and transformations to graph radical functions.

#1 $f(x) = \sqrt{x}$

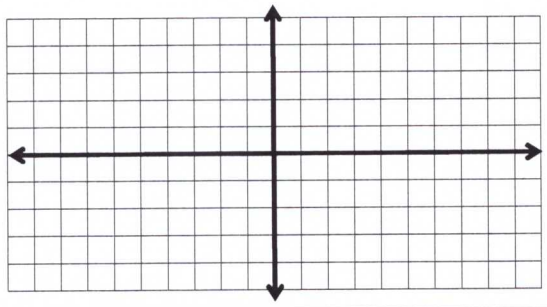


x	y

$y = a\sqrt{x-h} + k$	
$\lvert a \rvert > 1$	vertical stretch
$\lvert a \rvert < 1$	vertical compression/shrink
$a < 0$	reflection over x-axis
h	move right (-) or left (+)
k	move up (+) or down (-)

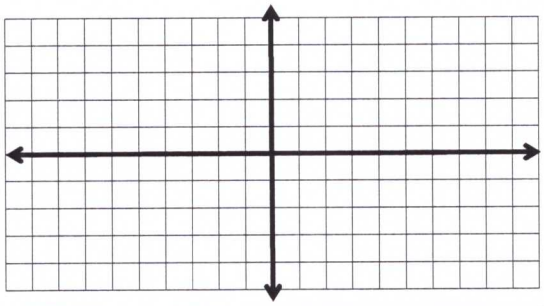
#2 $y = \sqrt{x-3}$

x	y



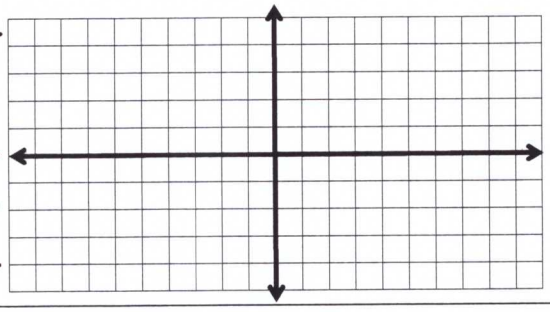
#3 $y = \sqrt{x-1} - 3$

x	y



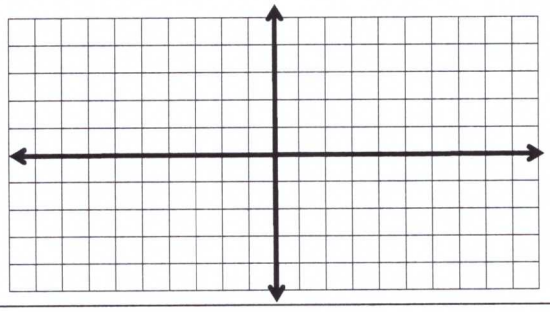
#4 $y = -\sqrt{x}+2$

x	y



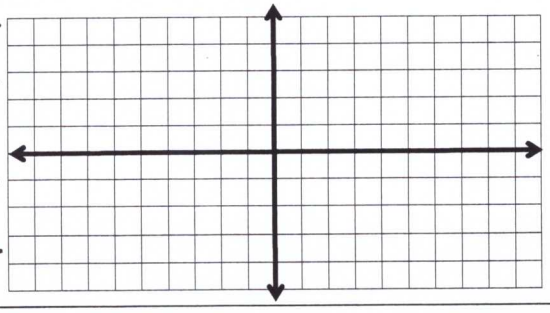
#4 $y = \frac{1}{2}\sqrt{x+6}$

x	y



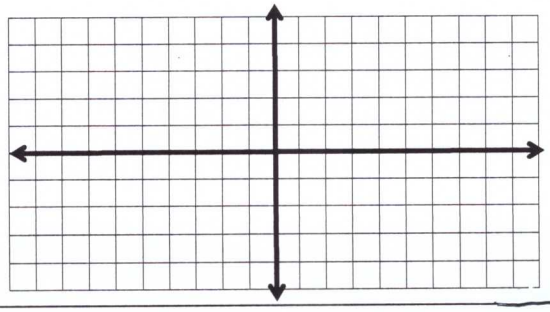
#5 $y = 2\sqrt{x+1}$

x	y



#6 $y = 2 - \sqrt{x+3}$

x	y



Lesson 7.7

Evaluating Square Root Functions

To evaluate a square root function at a value of x, substitute that value into the function everywhere that x occurs.

Example: For each function, find the indicated function value.

7) $f(x) = \sqrt{2x+5}$, $f(2)$

8) $g(x) = \sqrt{x+13}$ when $g(-4)$

Square Root Functions

Because the square root of a negative number is not a real number, the square root function is defined only for values of the independent variable that produce a nonnegative radicand.

Evaluate all of the functions when $x = 15$.

9) $j(x) = \sqrt{2x-5}$

10) $K(x) = \sqrt{5x-11}$

11) $M(x) = \sqrt{6+2x}$

Name: _____ Unit # 7 Lesson # 7

Activator

New Vocabulary (1 of 4)

New Vocabulary (2 of 4)

New Vocabulary (3 of 4)

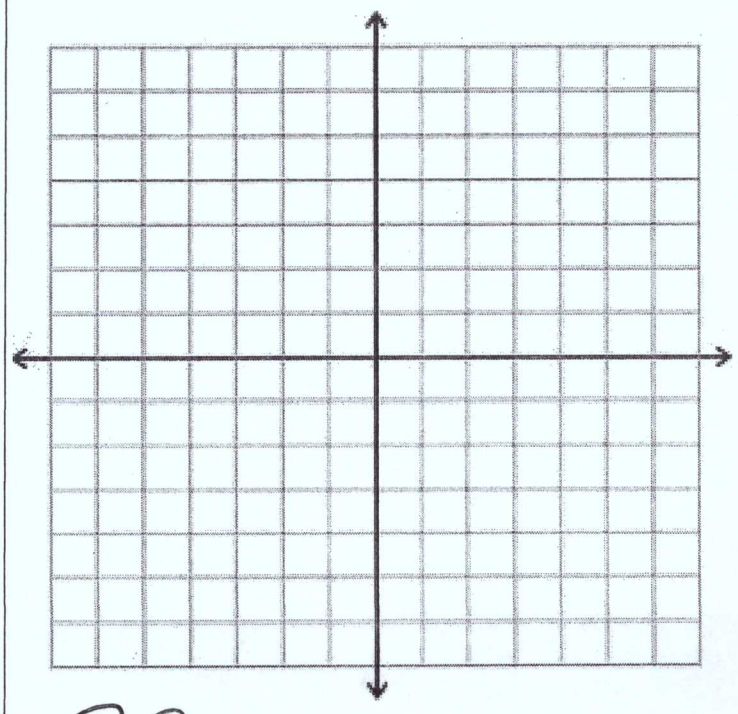
Unit # 7 Lesson # 7

Misconception (4 of 4)

Work Period

Exit Ticket

Extra Graph Paper



Name: _____

UNIT #7 Study Guide
COMMON CORE ALGEBRA I

Study Guide

PART I QUESTIONS: Show all of your work.

1. Write an Monomial expression. Write a trinomial expression.

2. Explain when to use the Circle Method vs. the Box Method.

3. Which of the following trinomials is equivalent to $(4x-5)^2$?

4. What is $f(x) + g(x)$, if $f(x) = 4x^2 + 6x - 3$ and $g(x) = -3x^2 - 8x - 4$

5. Which of the following is the value of $f(x) = 3x^2 - 4x - 2$ when $F(8)$?

6. Which of the following is equivalent to the expression shown below? $(2x+1)(2x-1)$

7. Which of the following is equivalent to the expression shown below? $(x-6)(x+6)$

8. From questions 6-7, add the two expressions (answers) together.

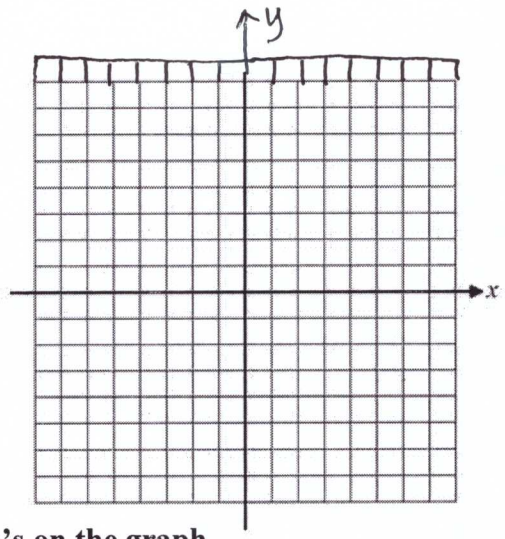
9. Which of the following is the correct distributed form of the binomial $2x^2(4x+5)$

Name: _____ Unit 7 Study Guide

10. What is the product of $(3x-3)$ and $(x+1)$?

11. Make a table and graph the answer from #10.

x	F(x)
-1	
	9



12. What are the zero's (roots) of the parabola from #10? **BOX the Zero's on the graph.**

13. What is the vertex and axis of symmetry of the quadratic from #10? **CIRCLE the Vertex on the graph. DRAW the axis of symmetry.**

14. Write the expression below in simplest form. $(4x^2-7x+3)-(5x^2+2x-6)$

15. Which of the following is equivalent to $8\sqrt{52}$?

Does $8\sqrt{52} = 16\sqrt{13}$?

Study Guide
Unit 7

16. Which of the following numbers is irrational? Simplify each answer.

Is $\sqrt{4} + \frac{1}{3}$ irrational ? ___ Why ?

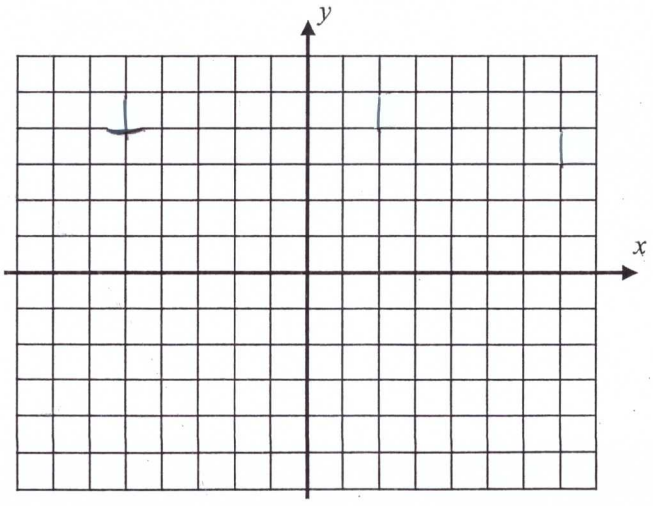
Is $\sqrt{3} + 5$ irrational ? ___ Why ?

17. Solve the following quadratic equation for x.

$(x+3)^2 = 49$

No substitution allowed.

18. Graph the function $f(x) = 4 - \sqrt{x+5}$ on the grid below.



19. Write your table from #18.

x	f(x)