Algebra 2 Final Exam Review Fall 2015

From Test 1

1. State the solution to each compound inequality.

a) $W < 8$ *AND* $W > 9$ b) $A \geq -9$ *OR* $A \leq 12$

c) $E > 6$ *OR* $E > 10$ d) $B > 0$ *AND* $B < 2$

e) $M \leq 6$ *AND* $M \leq 20$

2. Solve each equation for W. State the restrictions on the variables, if any.

a) $A(W+G)-K=M$ b) $\frac{EW-A}{T}+M=C$ c) $MW-RC=HW+AN$

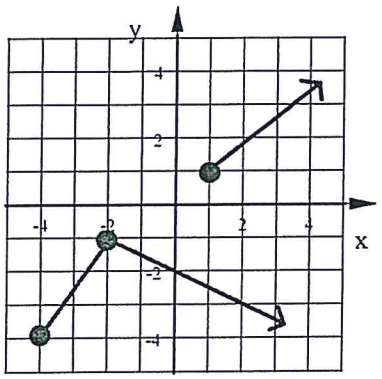
d) $\frac{H-C}{W}+R=X$

3. Use the following functions: $f(x)=x^2-3x$ $g(x)=\frac{5x}{x+1}$ $h(x)=x+4$

a) Find $f(h(x))$. Simplify as much as possible.

b) Find $g(h(x))$. Simplify as much as possible. c) Find $f(h(2))$

4. Find the Domain and Range of the graph shown below.



5. Is each table an example of Direct Variation, Inverse Variation, or neither. If the table represents Inverse or Direct Variaton write a variation equation and find the value of x when $y = 200$.

a)

x	y
2.5	25.6
8	8
40	1.6
50	1.28

b)

x	y
4	20
8	30
12	40
16	50

c)

x	y
−6	−45
8	60
12	90
18	135

6. The number of tires made varies directly with the number of workers at the factory. When there is 32 workers on the job 776 tires are made.

a) State the variation constant. Inlcude units with your answer.

b) Find the number of workers needed to make 1200 tires.

Solve each.

7. $4x+6(x-9)+12 < 7+5(2x-9)+3$ 8. $|2x-1|-5=44$

9. $|x+7.6|+11 > 40$ 10. $|2x+3|-4.4 \leq 11$

Chapter 3 and Sec 4-7

Solve each system of equations. State each solution as an ordered pair. Use each of the following methods at least once each: Matrices, Elimination, and Substitution.

Write No Solution or Many Solutions when necessary.

1. $y = 2x - 3$
$4x - 5y = -15$

2. $2x + 4y = 12$
$3x + 6y = -24$

3. $7A + 6B = -36$
$3A - 4B = -22$

4. $2P + 6Q = 8$
$5P + 15Q = 20$

5. $4x - 5y + 2z = 26$
$-x + 3y - 6z = -20$
$7x + y = 11$

6. Without actually solving the system of equations state the number of solutions: One, None, or Many

a. # sol:_____
$y = 4x - 9$
$2x + 8y = 24$

b. # sol:_____
$y = -\frac{3}{2}x + 5$
$6x + 4y = 20$

c. # sol:_____
$y = 10$
$10x + 2y = 14$

d. # sol:_____
$y = 2x + 1$
$y + 3 = 2(x - 2)$

7. There are 128 students in a large lecture hall. The number of females is seven less than twice the number of males. Write and solve a system of equations to find the number or females and males in the lecture hall. State the method used to solve the system of equations.

8. At 7-11 I bought 2 Gulps and 5 Big Gulps and spent $8.40. The next day I bought 3 Gulps and 8 Big Gulps and spent $13.23. The prices for were the same both days. Write and solve a system of equations to find the cost of a Gulp and the cost of a Big Gulp. State the method used to solve the system of equations.