East Los Angeles College
Department of Mathematics
Math 125
Test 4/Final Exam Study Guide

Solve the following for x

1) $|x-5|-12=8$

2) $3|x|-8=10$

3) $(x-1)^2=16$

4) $x^2=-36$

5) $x^2-4x+6=0$

6) $2x^2-5x+2=0$

7) $\sqrt{x-1}=4$

8) $\sqrt[3]{x+2}=-3$

9) $2^{x-3}=16$

10) $5^{-x}=25$

11) $3^x=8$

12) $5^{x-2}=12$

13) $e^{-x}=4$

14) $e^{x-5}+3=8$

15) $log(x+5)=2$

16) $log_3(x-4)+log_3(x+4)=2$

17) $log_4(x)-log_4(x-15)=2$

18) $log(2x+5)=log(x-3)$

19) $log_5(x-1)=2$

20) $log_9(x+2)=\frac{1}{2}$

21) $log_4(x-3)=-\frac{1}{2}$

22) $log(x+5)=2$

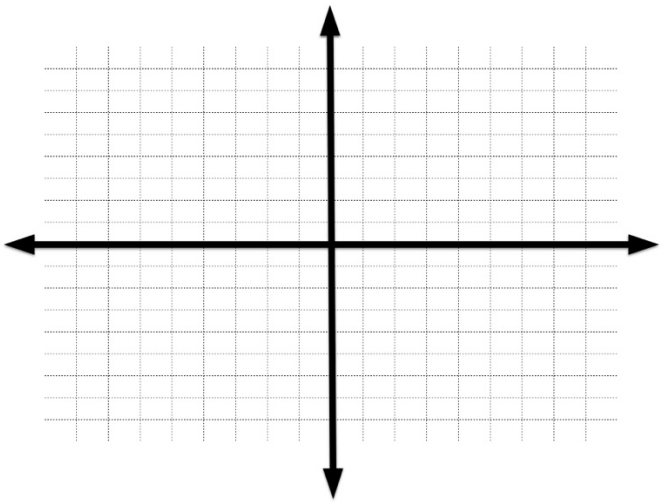
Given the quadratic $y=-2(x+1)^2+3$ answer the following questions.

23) Determine the vertex

24) Determine the x-intercepts, if any.

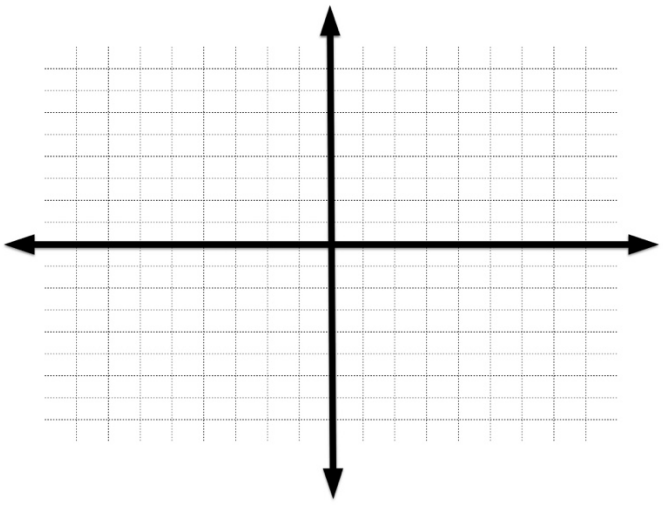
25) Determine the y-intercepts

26) Sketch the curve on the graph paper.



27) Complete the square and graph the following conic section.

$$x^2 + y^2 - 8y + 15 = 0$$



Determine the domain for the following functions.

28) $f(x) = \sqrt{x-7}$

29) $f(x) = \frac{1}{2x-8}$

Determine the inverse for the following 1 to 1 function.

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

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

A couple invests $ 800 at 6% annual interest. How much will the couple have in 25 years, if the interest is compounded:

32) Quarterly?

33) Monthly?

34) Continuously?

35) How many years will it take for your money to double?

36) How many years will it take for your money to triple?

37) How many years will it take for your money to reach $ 3,000?

38) What is your name?

Answer Sheet

1		15		31	
2		16		32	
3		17		33	
4		18		34	
5		19		35	
6		20		36	
7		21		37	
8		22		38	
9		23			
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11		25			
12		26	Use Graph Paper		
13		27	Use Graph Paper		
14		28			
15		30			