Solve the following for x

1) $|x - 5| - 2 = 18$

2) $3|x| + 8 = 11$

3) $(x - 1)^2 = 4$

4) $x^2 = -16$

5) $x^2 - 4x + 7 = 0$

6) $2x^2 - 5x + 3 = 0$

7) $\sqrt{x - 1} = 5$

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

9) $4^x = 2$

10) $8^x = 2$

11) $2^{x-3} = 32$

12) $5^{-x} = 125$

13) $3^x = 10$

14) $5^{x-2} = 11$

15) $e^{-x} = 5$

16) $e^{x-5} + 3 = 12$

17) $log_2(x) = 5$

18) $log_{36}(x) = \frac{1}{2}$

19) $log_9(x + 1) = -2$

20) $log_5(x) = -1$

21) $log(x + 5) = 1$

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

23) $log_4(x) - log_4(x - 15) = 2$
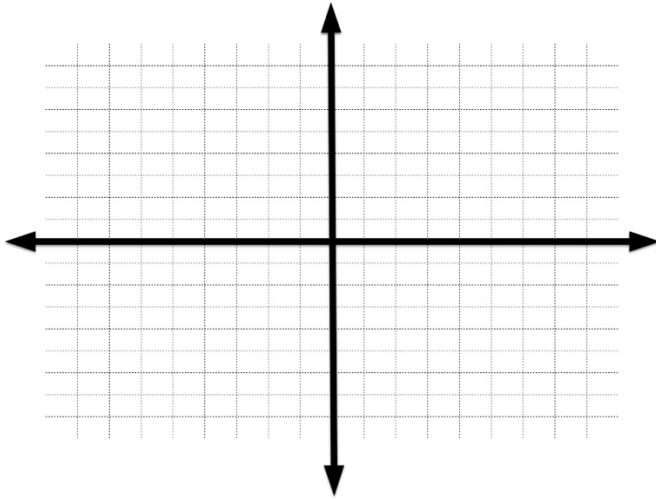
24) $log(2x - 5) = log(x + 3)$

Given the quadratic $y = 2x^2 - 8x + 3$ answer the following questions.

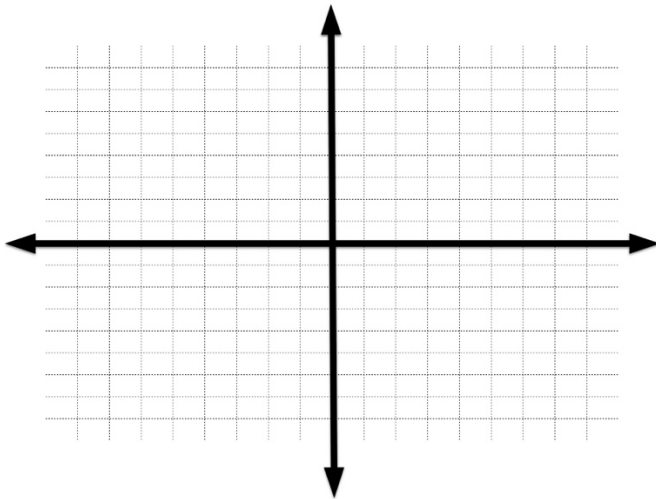25) Determine the vertex

26) Determine the x-intercepts, if any.

27) Determine the y-intercepts

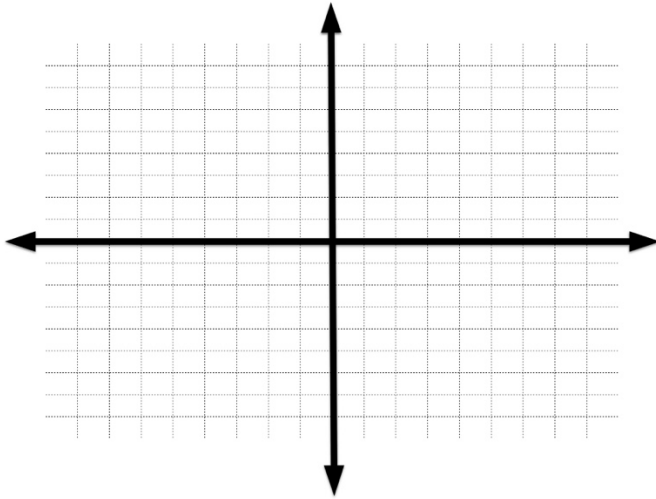28) Sketch the curve on the graph paper.

29) Complete the square and graph the following conic section.
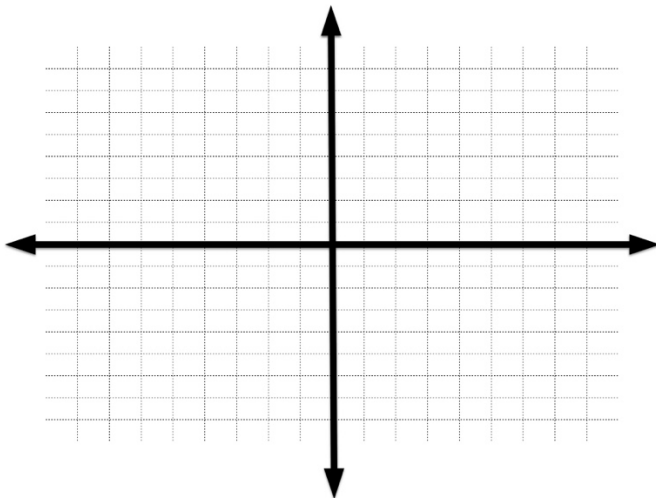$$x^2 - 4x + y^2 - 6y = -9$$

30) Complete the square and graph the following conic section.
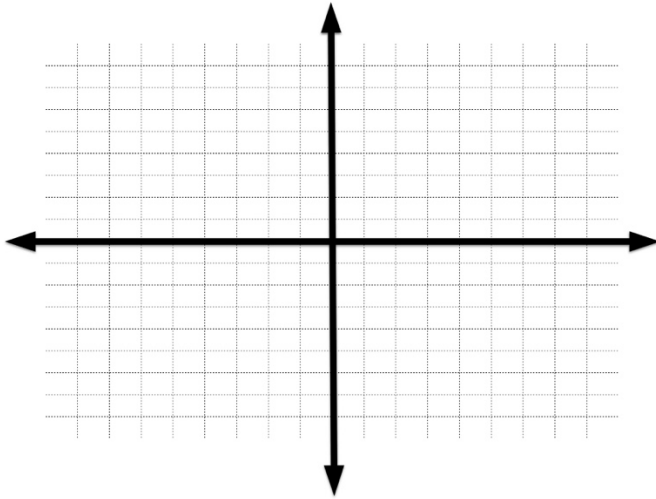$$x^2 + y^2 - 8y + 15 = 0$$

31) Complete the square and graph the following conic section.
$$(x + 1)^2 + 4(y - 1)^2 = 16$$

32) Complete the square and graph the following conic section.
$$4(x - 3)^2 + 25(y + 2)^2 = 100$$

Determine the domain for the following functions.

33) $f(x) = \sqrt{x + 7}$

34) $f(x) = \frac{1}{4x - 12}$

Determine the inverse for the following 1 to 1 function.

35) $f(x) = 3x + 7$

36) $f(x) = \sqrt{x + 6}$

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

37) Quarterly?

38) Monthly?

39) Continuously?

40) What is your name?

Answer Sheet

1		21	
2		22	
3		23	
4		24	
5		25	
6		26	
7		27	
8		28	Use Graph Paper
9		29	Use Graph Paper
10		30	Use Graph Paper
11		31	Use Graph Paper
12		32	Use Graph Paper
13		33	
14		34	
15		35	
16		36	
17		37	
18		38	
19		39	
20		40	