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

10) $5^{-x} = 125$

11) $3^x = 10$

12) $5^{x-2} = 11$

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

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

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

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

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

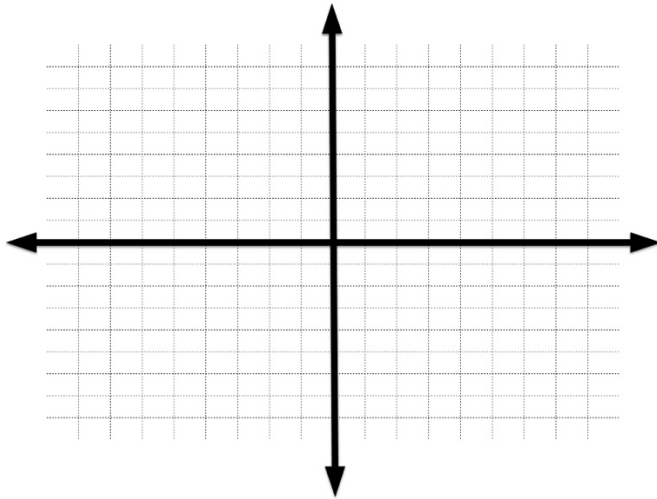18) $log(2x - 5) = log(x + 3)$

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

19) Determine the vertex
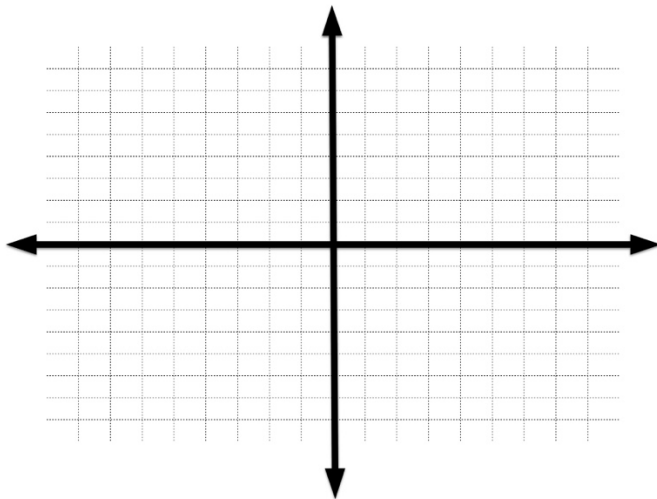
20) Determine the x-intercepts, if any.

21) Determine the y-intercepts
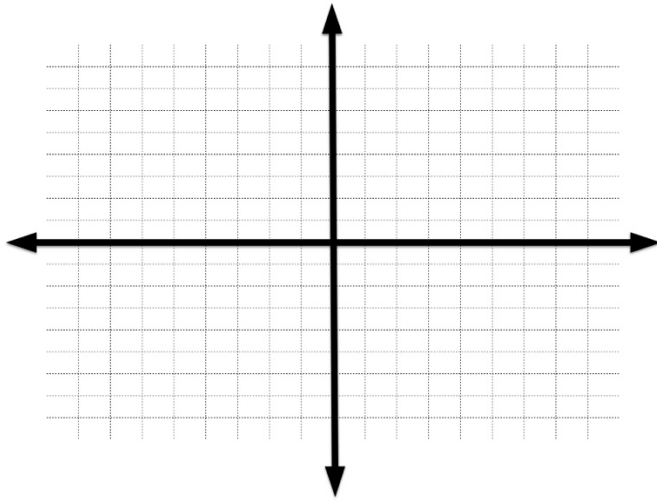
22) Sketch the curve on the graph paper.

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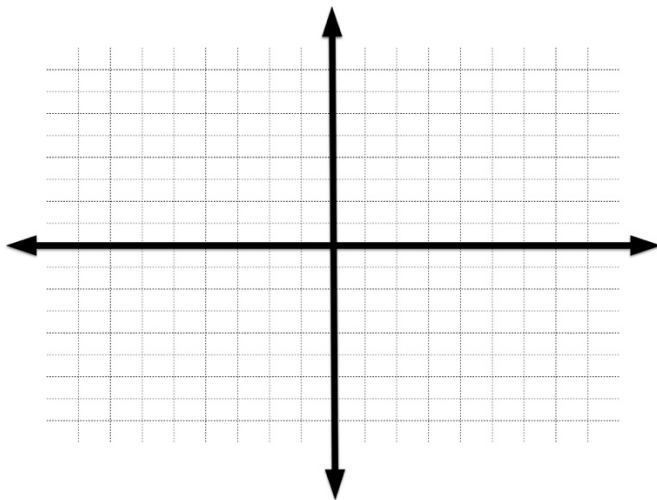$$x^2 - 4x + y^2 - 6y = -9$$

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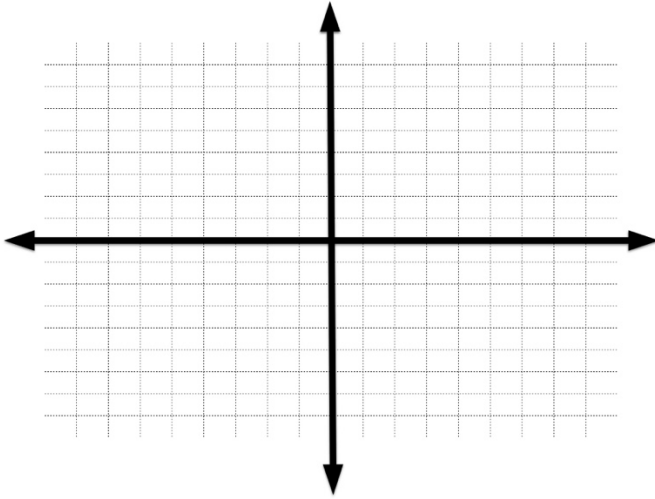
$$x^2 + y^2 - 8y + 15 = 0$$

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

$$(x + 1)^2 + 4(y - 1)^2 = 16$$

26) 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.

27) $f(x) = \sqrt{x + 4}$ 28) $f(x) = \frac{1}{3x - 12}$

Determine the inverse for the following 1 to 1 function.

29) $f(x) = 3x + 7$ 30) $f(x) = \sqrt{x + 6}$

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

31) Quarterly?

32) Monthly?

33) Continuously?

34) what is your name?

Answer Sheet

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