

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

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) $\sqrt{x} - 5 = 3$

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

9) $x = \sqrt{x+7} + 5$

10) $\sqrt{2x-5} = 1 + \sqrt{x-3}$

11) $x^4 - 13x^2 + 36 = 0$

12) $x + 4\sqrt{x} - 12 = 0$

13) $(x^2 - 2)^2 - 12(x^2 - 2) + 20 = 0$

14) $(3 + \sqrt{x})^2 + 3(3 + \sqrt{x}) - 10 = 0$

15) $2x^{-2} + 7x^{-1} - 15 = 0$

16) $9\left(\frac{x+2}{x+3}\right)^2 - 6\left(\frac{x+2}{x+3}\right) + 1 = 0$

17) $4^x - 3 = 2$

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

19) $\log_2(x) = 5$

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

21) $\log_3(x - 4) + \log_3(x + 4) = 2$

22) $\log_4(x) - \log_4(x - 15) = 2$

Solve and Graph

23) $x^2 + x - 2 < 0$

24) $x^2 + 4x + 4 < 0$

Determine the domain of the following functions and write your answer in set notation.

25) $f(x) = \frac{5}{x^2-12}$

26) $f(x) = \sqrt{\frac{x-4}{x+2}}$

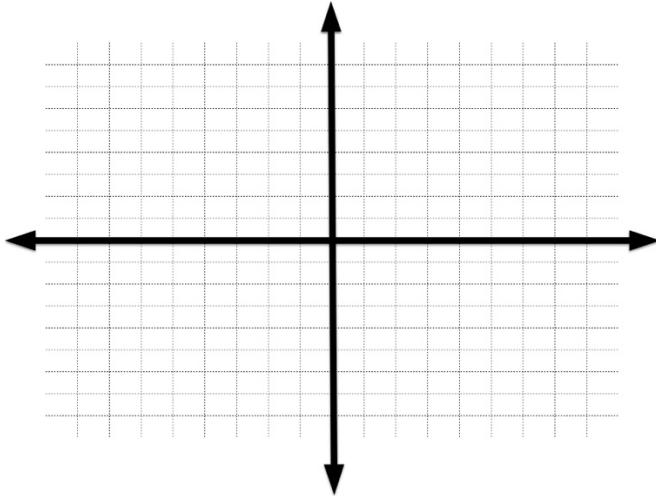
Given the quadratic $y = x^2 - 2x + 4$ answer the following questions.

27) Determine the vertex

28) Determine the x-intercepts, if any.

29) Determine the y-intercepts

30) Sketch the curve on the graph paper.



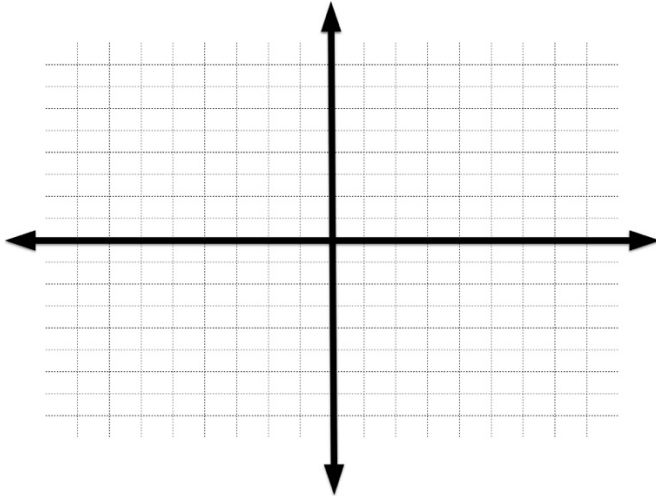
Given the quadratic $y = 2x^2 + 8x - 5$ answer the following questions.

31) Determine the vertex

32) Determine the x-intercepts, if any.

33) Determine the y-intercepts

34) Sketch the curve on the graph paper.



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

35) Quarterly?

36) Monthly?

37) Continuously?

38) What is your Test 1 score?

39) What is your Test 2 score?

40) What is your Test 3 score?

41) What is your name?

Answer Sheet

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