East Los Angeles College
Department of Mathematics
Math 125
Practice Test 3

Show all work for credit.

Solve the following equations for x and write your answers in set notation.

1. $x^2 = 16$

2. $x^2 = -16$

3. $3x^2 - 2 = 22$

4. $9x^2 = 45$

5. $(x - 3)^2 = -25$

6. $(x + 4)^2 = 20$

7. $\sqrt[3]{x + 5} = -2$

8. $\sqrt[3]{x} + 4 = 8$

9. $4\sqrt{x + 6} - 5 = 23$

10. $-3\sqrt{x} = 15$

11. $2\sqrt{x - 5} - 8 = -4$

12. $\sqrt[3]{x} + 9 = 6$

13. $\sqrt{3x + 5} = \sqrt{x - 9}$

14. $\sqrt{x + 7} = x - 5$

Solve for x by completing the square and write your answers in set notation.

15. $x^2 + 4x + 7 = 0$

16. $2x^2 - 4x + 5 = 0$

Solve for x by using the quadratic formula and write your answers in set notation.

17. $x^2 + 6x - 5 = 0$

18. $3x^2 - 4x - 2 = 0$

Solve and Graph

19. $x(x - 4) \geq 0$

20. $x^2 - x - 12 > 0$

21. $x^2 < 4$

22. $(x + 3)(x - 2)(x + 6) \leq 0$