

Precalculus – Chapter 2 Partner Test 2013
Non-Calculator Portion

Name: _____
Date: _____ Hour: _____

For #1-3, solve the equations using square roots, factoring, the quadratic formula, or completing the square. Simplify all solutions. **Show all work!**

1. $2x^2 - 5x = 3$

2. $(x - 3)^2 = 12$

3. $\frac{x^2 + 3x - 4}{x^2 - 16} = 0$

1. _____

2. _____

3. _____

Solve by using the quadratic formula. Simplify exact answer.

4. $2x^2 - 8x - 3 = 0$

4. _____

5. Solve by completing the square: $2x^2 - 12x - 6 = 0$.

Show all work! YOU MUST COMPLETE THE SQUARE!

5. _____

6. Find the exact real solutions of: $x^4 - 7x^2 + 12 = 0$.

6. _____

7. A. Determine the discriminant for $5x^2 - 50x + 125 = 0$.
B. Determine the number of real solutions.

7. A. _____ B. _____

For #8-11, solve algebraically. Check for extraneous solutions! **Show all work!**

8. $\sqrt[3]{2x+1} + 5 = 8$

8. _____

9. $\sqrt{2x+4} - \sqrt{x} = 2$

9. _____

10. $|x^2 - 6x - 9| = 18$

10. _____

11. $|2x - 1| = x + 4$

11. _____

12. $x + 3(x - 5) > 3x + 2(x + 1)$ (Use **interval notation** in your answer.)

12. _____

13. $-4x - 5 \leq 4 - 3x < 1 - 4x$ (Use **interval notation** in your answer.)

13. _____

14. $x^2 - x - 6 \geq 0$ (Use **interval notation** in your answer.)

14. _____