

Name: _____

College Algebra: Review (Test 1)

Solve the following equations.

1. $\frac{x}{x-1} + 4 = \frac{9}{x-1}$

2. $|-5x + 1| + 9 = 25$

3. $-1 - |7x + 7| = |7x + 7| - 1$

4. $|-14x + 14| + 7 = -2$

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

6. $x^2 + x - 72 = 0$

7. $2x^2 - 11x + 5 = 0$

8. $3x^2 - 2x - 1 = 0$

9. $x^2 - 2x - 2 = 0$

10. $x^3 - x^2 - 42x = 0$

11. $2x^4 + 5x^2 - 7 = 0$

12. $|x^2 - 8x + 18| = 3$

Solve the following inequalities and graph your solutions. Give your answers in interval notation.

1. $|-5x + 1| + 8 < 24$

2. $2|2x - 1| + 15 > 20$