

Name: _____

College Algebra: Review (Test 1)

Solve the following equations.

1. $\frac{x}{x+3} + 5 = \frac{2}{x+3}$

2. $|-4x - 8| + 7 = 15$

3. $-2 - |3x + 6| = |3x + 6| - 2$

4. $|-6x - 19| + 14 = 9$

5. $x^2 - 6x + 8 = 0$

6. $x^2 - 2x - 63 = 0$

7. $2x^2 - 11x + 14 = 0$

8. $3x^2 - 19x + 28 = 0$

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

10. $x^3 + x^2 - 72x = 0$

11. $2x^4 - 17x^2 + 35 = 0$

12. $|x^2 - 6x + 10| = 2$

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

1. $|-2x + 2| + 13 < 29$

2. $2|-4x - 9| + 14 > 29$