

# Handout 4: Not All Equations Are Created Equal-

1. Solve  $\frac{3}{x+1} + \frac{4}{x-1} = 2$ .

6. Solve the inequality  $x^2 - 3 \geq x$ .

2. Solve  $-x^4 + 4x^2 - 3 = 0$ .

7. Solve the inequality  $-x^2 + 4x > 3$ .

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

8. Solve the inequality  $2x^2 + 7x - 2 \leq 2$ .

4. Solve  $x - 2\sqrt{x} + 1 = 0$ .

9. Solve the inequality  $6x < 3x^2 - 9$ .

5. Solve the inequality  $-2x^2 + 3x + 1 < 0$ .

10. Solve the inequality  $-x^2 - 2x + 1 > 0$ .