Name: _____

Absolute Value and Polynomial Inequalities

Solve each inequality. Put the solution in interval notation.

1. $|2x-5| \leq 7$

2. $|2-3x| \leq 13$

3. $x^2 - 4x > 5$

4. $3x^3 - 9x^2 - x < -3$

5. $x^4 - 34x^2 + 225 \leq 0$

6. $x^2 + 2x > -4$

7. $x^2 + 2x + 1 \leq 0$

8. $2x^2 + 3x + 8 < 0$

9. $x^2 - 6x + 9 > 0$

10. Quality control has an acceptable weight differential of ½ oz. If a machine part is supposed to weigh 4.8 oz., determine the interval containing the acceptable weight ranges. Write as an absolute value inequality.