Homework Set 2

Solve the following equations for $x$.

1. $x^2 + 7x + 12 = 0$

2. $x^2 - 8x = -7$

3. $x^4 + 10x^2 + 16x^2 = 0$

4. $|2x - 3| = 7$

5. $2|x| + 7 = 6$

6. $2|x + 5| - 10 = 0$
Solve the following inequalities for $x$. Write your answer in interval notation.

7. $4x + 3 > x$

8. $\frac{1}{2}(x + 1) < 3$

9. $4(x - 1) \leq 3x - 4$

10. $|3x - 1| < 2$

11. $|2x - 7| \geq -5$

12. $3|x - 1| + 2 \leq 8$