NAME:

Test 7 (Lessons 13–14): Radical Equations and Inequalities

Solve.

1) $\sqrt{x-3}+6=10$

2) $(x+6)^{\frac{1}{4}}=(4x+7)^{\frac{1}{4}}$

3) $\sqrt{x+4}=3-\sqrt{x+1}$

4) $\sqrt{x+12}-\sqrt{x}=5$

5) $(x+5)^{\frac{2}{3}}-7=-3$

6) $\sqrt{x-9}=9-\sqrt{x}$

Solve. Graph the solution on a number line.

7) $\sqrt{4x+8}-6\leq 2$

8) $\sqrt{2x-15}-\sqrt{9+x}>0$

9) $3+\sqrt{\frac{1}{2}x+7}\geq 5$

10) $2-\sqrt{3x-4}<-1$