Name:_____ Ch 11 Review

Lesson 11-1 **Simplify each radical expression.**

1. $\frac{\sqrt{27}}{\sqrt{81}}$
2. $\sqrt{\frac{25}{4}}$
3. $\sqrt{\frac{50}{9}}$
4. $\frac{\sqrt{72}}{\sqrt{50}}$
5. $\sqrt{25} \cdot \sqrt{4}$
6. $\sqrt{45} \cdot \sqrt{18}$

Lesson 11-2 **Simplify each radical expression.**

7. $\sqrt{75} - 4\sqrt{75}$
8. $\sqrt{5}(\sqrt{20} - \sqrt{80})$
9. $\sqrt{6}(\sqrt{6} - 3)$
10. $3\sqrt{300} + 2\sqrt{27}$
11. $5\sqrt{2} \cdot 3\sqrt{50}$
12. $\sqrt{8} - 4\sqrt{2}$
13. $(\sqrt{5} + 1)(\sqrt{5} - 1)$
14. $(\sqrt{3} + \sqrt{2})^2$

Lesson 11-3 **Solve each radical equation. Check your solution.**

15. $\sqrt{3x + 4} = 1$
16. $6 = \sqrt{8x - 4}$
17. $\sqrt{2x + 5} = \sqrt{3x + 1}$
18. $\sqrt{3x - 2} = x$

Graph each function. State the domain and range.

19. $y = \sqrt{x - 1} + 2$
20. $f(x) = \sqrt{x} - 4$
21. $f(x) = \sqrt{x - 1} - 2$
22. $f(x) = \sqrt{x} + 3$