$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Name: _____ Block: _____

Pre-Calculus 11: Radicals Quiz #2

Full credit will only be awarded for all work shown in a neat and organized manner.

1. Simplify each expression. Assume all variables are positive.

   a. $\left(2x\sqrt[3]{12x^2y^4}\right)\left(3\sqrt[3]{2x^5y^5}\right)$

   b. $(\sqrt{18} - 2\sqrt{6})^2$

2. Simplify each expression and answer with a radical. Assume all variables are positive.

   a. $\frac{\sqrt[5]{a^6}}{\sqrt[4]{a^7}}$

   b. $\sqrt[3]{x^5} \cdot \sqrt{x^7}$

3. Rationalize the denominator and simplify. Assume all variables are positive.

   a. $\frac{\sqrt[4]{4}}{\sqrt[4]{x}}$

   b. $\frac{\sqrt{14} + 1}{-4 - \sqrt{2}}$

4. Solve each equation and verify your solutions.

a. $-2\sqrt[4]{x-1}=4$

b. $\sqrt{2x-5}=2x-7$