Instructions: Each question is worth 3 points but the last question. **Show all your work in order to receive credit**.

Problem 1. (3 points) Add the radicals.

(a) $6\sqrt{50} - 2\sqrt{8} + 5\sqrt{12}$

Problem 2. (1.5 points each) Give the domain of the functions.

(a) $r(x) = \sqrt[12]{2 - \frac{1}{7}x}$

(b) $f(x) = \sqrt[13]{100 - \frac{3}{5}x}$

Problem 3. (3 points) Simplify the radical and solve for c, $\sqrt{c^2 + 24c + 144} + \sqrt{c^4 + 7c} = 0$

Problem 4. (1 points) **Extra credit**. If you were to have one superpower, what would it be and why?