Math 134 Spring 2018
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Homework Quiz 5   Name: _____

Show all your work and simplify your answers unless otherwise specified. If you do not turn in
a rewrite within a week (or after the fifth attempt), your score will be solidified.

1. Solve the polynomial equation. Note: the number of solutions equals the degree of this
polynomial.
$$x^4 = x$$

2. Solve the radical equation. Check your answers and eliminate any extraneous solutions.

$$\sqrt{x+2} - \sqrt{2x-3} = 4$$

3. Solve the equation.

   Hint: To solve an equation like $|x| = |y|$ solve the equations $x = y$ and $x = -y$.
   Example: $|x - 4| = |4x + 5|$ becomes $x - 4 = 4x + 5$ or $x - 4 = -(4x + 5) = -4x - 5$

$$|10x - 13| = |5x + 19|$$

4. Each side of a square is lengthened by 2 inches. The area of this new, larger square is 81 square inches. Find the length of a side of the original square.

   Hint: If x is the side length of the square, the area is x^2. Since each side is lengthened by 2 inches, apply this formula to the square of side length $x + 2$