

Name: \_\_\_\_\_

MATH 101

Spring 2022

HW 10: Due 04/12

*“Algebra is the metaphysics of  
arithmetic.”*

*–John Ray*

**Problem 1.** (10pt) Use completing the square to solve the following equation:

$$x(3x - 7) = 6$$

**Problem 2.** (10pt) Use factoring to solve the following equation:

$$3x = 54 - x^2$$

**Problem 3.** (10pt) Use the quadratic equation to solve the following equation:

$$9x^2 + 23 = 30x$$

**Problem 4.** (10pt) Use the quadratic formula to factor  $432x^2 + 642x - 315$ .