

Math 3280 Worksheet 15: Curve-fitting with matrices

Group members (2 to 4): \_\_\_\_\_

(1) Using the equation

$$Ax + By + C = x^2 + y^2,$$

find a circle passing through the points  $(1, 7)$ ,  $(-1, 3)$ , and  $(0, 0)$ . After finding  $A$ ,  $B$ , and  $C$ , complete the squares to put the circle's equation in the standard form

$$(x - c_x)^2 + (y - c_y)^2 = r^2.$$