

College Geometry MTG4212 Fall 2011
Homework 7
Due Monday, October 31, 2011

I. Let O denote the origin. Calculate the following points:

$$I_{O,5}(0, 4), I_{O,5}(-1, 4), I_{O,5}(-5, 0), I_{O,5}(3, 7).$$

II. To what line or curve does the inversion $I_{O,5}$ transform the following figures:

- (a) The line $x = 2$.
- (b) The line $y = x + 10$.
- (c) The circle centered at $(2, 0)$ of radius 2.
- (d) The circle centered at $(0, 4)$ of radius 4.
- (e) The circle centered at $(3, 0)$ of radius 1.
- (f) The circle centered at $(6, 0)$ of radius 3.
- (g) The line $y = 3x$.