Math 10460 - Honors Mathematics II
Homework 1a - Due Wednesday, January 20

(1) (a) The following points are in Cartesian coordinates (x, y). Change them to polar coordinates (r, θ). Give both sets of coordinates for the point with $0 \leq \theta < 2\pi$.

$$(a)\ (0, -6) \qquad (b)\ \left(3, -\sqrt{3}\right)$$

(b) The following points are in polar coordinates (r, θ). Change them to Cartesian coordinates (x, y).

$$(a)\ \left(-2, \frac{5\pi}{3}\right) \qquad (b)\ \left(\sqrt{2}, \frac{\pi}{4}\right)$$

(2) Exercise 12.1 from the text
(3) Exercise 12.2 from the text