

**Quiz 8 — 11/22/16**

Answer all questions in a clear and concise manner. Answers that are without explanations or are poorly presented may not receive full credit.

**1.** Convert  $(x, y) = (-1, \sqrt{3})$  from cartesian coordinates into polar coordinates  $(r, \theta)$  with  $r > 0$  and  $0 \leq \theta < 2\pi$ .

**2.** Let  $r(\theta) = \cos(2\theta)$ . Find the slope of the tangent line to  $r$  at  $\theta = \pi/4$ .