Math 232 Worksheet 16 - Polar Curves

1. Consider the polar curve $r = \cos\theta, \ 0 \le \theta \le \pi$.
    (a) Sketch the curve.
    (b) Find an equation of the tangent line to the curve when $\theta = \frac{\pi}{4}$.
    (c) Find the arclength of the curve.
    (d) Find the area enclosed by the curve.

Answer Keys:

1. (b) $y = 1/2$ (c) π (d) $\pi/4$