Practice Problems: Parametrizations of Plane Curves

Answers

1. (a)

1. (b)

1. (c)
2. For each curve, there are many possible parametrizations. You may have a correct answer that
does not match the answers below.

(a) \( x(t) = 3 \cos t - 1, \quad y(t) = 3 \sin t + 1 \)
(b) \( x(t) = 4 \sin(2t), \quad y(t) = 3 \cos t \)
(c) \( x(t) = 4 \sin t, \quad y(t) = t \)

3. (a) \( y = x^{4/3} \)
(b) \( y = \ln(t^6 + 2) \)
(c) \( y = (\tan x + 1)^2, \quad -\frac{\pi}{2} < x < \frac{\pi}{2} \)