(Easier) Practice Quiz 6 Calc 3 10/26/2009

1. Give parametric equations x(t), y(t), z(t) and bounds for t that produce a path from (3, 0, 1) to (5, 7, 1).

   $x(t) = 3 + 2t$
   $y(t) = 7t$
   $z(t) = 1$

   for $0 \le t \le 1$

2. Give parametric equations x(t), y(t), z(t) and bounds for t that produce a unit circle centered at the origin in the plane $z = 0$ beginning at (1, 0, 0).

   $x(t) = \cos t$
   $y(t) = \sin t$
   $z(t) = 0$

   for $0 \le t \le 2\pi$

(Harder) Practice Quiz 6 Calc 3 10/26/2009

1. Give parametric equations x(t), y(t), z(t), and bounds for t that produce a path from (-2, 7, 1) to (a, b, c).

   $x(t) = -2 + (a + 2)t$
   $y(t) = 7 + (b - 7)t$
   $z(t) = 1 + (c - 1)t$

   for $0 \le t \le 1$

2. Give parametric equations x(t), y(t), z(t) and bounds for t that produce an arc of a circle centered at (0, 0, 3) in the plane $z = 3$ of radius a beginning at (0, a, 3) and continuing counterclockwise through n quadrants.

   $x(t) = a \cos t$
   $y(t) = a \sin t$
   $z(t) = 3$

   for $\pi/2 \le t \le \pi/2 + n\,\pi/2$