Quiz 3 Calculus 3 11/2/11

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Give parametric equations x(t), y(t), z(t) and bounds for t that produce a path from (–2, 4, 1) to (5, 2, 1).

$\langle -2,4,1\rangle + t\langle 7,-2,0\rangle$

$x(t) = -2+7t$

$y(t) = 4-2t$ $\quad 0 \le t \le 1$

$z(t) = 1$

Great!

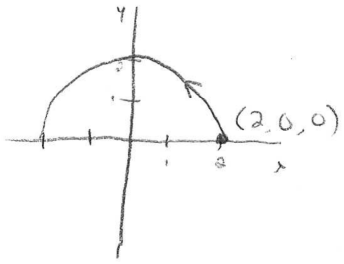
2. Give parametric equations x(t), y(t), z(t) and bounds for t that produce the top half of a circle with radius 2 centered at the origin in the plane $z = 0$ beginning at (2, 0, 0).

$r = 2$

$x = r\cos t$

$y = r\sin t$

$z = 2$



$x(t) = 2\cos(t)$

$y(t) = 2\sin(t)$

$z(t) = 0$

Excellent!

$0 \le t \le \pi$