Quiz 4 Calc 3 11/2/2010

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 (5, 0, 4) to (5, 7, –1).

$x(t) = 5$
$y(t) = 7t$
$z(t) = 4 - 5t$
$0 \le t \le 1$

$5 + (5-5)t = x(t)$
$0 + (7-0)t = y(t)$
$4 + (-1-4)t = z(t)$

Good!

2. Give parametric equations x(t), y(t), z(t) and bounds for t that produce the first-octant portion of a radius 3 circle centered at (0,0,4) in the plane $z = 4$.

$x(t) = 3\cos t$
$y(t) = 3\sin t$
$z(t) = 4$
$0 \le t \le \pi/2$

Great!

Top View