

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

1. Give parametric equations $x(t)$, $y(t)$, and $z(t)$, along with bounds for t , for the line segment from $(1,3,8)$ to $(5,9,4)$.

$$\underline{x(t) = 1 + 4t}$$

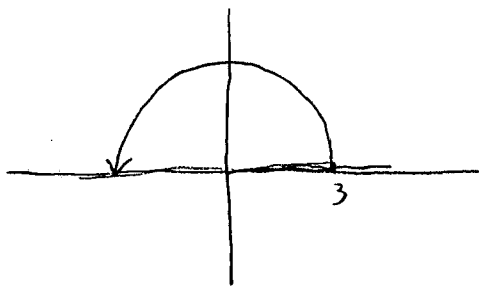
$$\underline{y(t) = 3 + 6t}$$

$$\underline{z(t) = 8 - 4t}$$

$$\underline{0 \leq t \leq 1}$$

Good

2. Give parametric equations $x(t)$ and $y(t)$ and bounds for t for the top half of a circle with radius 3, centered at the origin, and traversed counterclockwise.



Great

$$\underline{x(t) = 3 \cos(t)}$$

$$\underline{y(t) = 3 \sin(t)}$$

$$\underline{0 \leq t \leq \pi}$$

$$x = 3 \cos t$$

$$y = 3 \sin t$$

$$0 \leq t \leq \pi$$