

1. Give parametric equations  $x(t)$ ,  $y(t)$ ,  $z(t)$  and bounds for  $t$  that produce a path from  $(7, 7, -4)$  to  $(5, 7, 1)$ .

$$\begin{aligned} x(t) &= 7 + (5-7)t &= \underline{7-2t} \\ y(t) &= 7 - 0t &= \underline{7} \\ z(t) &= -4 + (1-(-4))t &= \underline{-4+5t} \end{aligned}$$

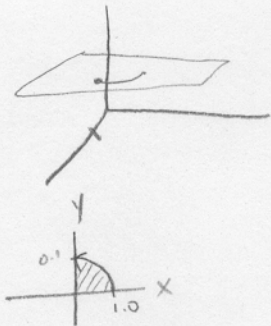
for  $\underline{0 \leq t \leq 1}$

Excellent!

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

$$\begin{aligned} x(t) &= \cos t \\ y(t) &= \sin t \\ z(t) &= \underline{2} \end{aligned}$$

$$\underline{0 \leq t \leq \frac{\pi}{2}}$$



radius = 1

Nice!