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

\[
\begin{align*}
x(t) &= 3 + 2t \\
y(t) &= 7t \\
z(t) &= 1
\end{align*}
\]

for \( 0 \leq t \leq 1 \)

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 \((1, 0, 0)\).

\[
\begin{align*}
x(t) &= \cos t \\
y(t) &= \sin t \\
z(t) &= 0
\end{align*}
\]

for \( 0 \leq t \leq 2\pi \)
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 $0 \leq t \leq 1$

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 $\pi/2 \leq t \leq \pi/2 + n \pi/2$