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).

   $x(t) = 3 + 2t$
   $y(t) = 7t$
   $z(t) = 1$

   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).

   $x(t) = \cos t$
   $y(t) = \sin t$
   $z(t) = 0$

   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 $0 \le t \le 1$

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