

Parametric Curves in the Plane

1. Line Segment from $(3, 5)$ to $(-4, 1)$.

$$\begin{aligned}x &= 3 + (-4-3)t = 4-7t \\y &= 5 + (1-5)t = 5-4t, \quad 0 \leq t \leq 1\end{aligned}$$

2. Circle with center ~~(1, -3)~~ $(1, -3)$ and radius 5.

$$\begin{aligned}x &= 1 + 5\cos(t) \\y &= -3 + 5\sin(t), \quad 0 \leq t \leq 2\pi\end{aligned}$$