

Parametric Equations

Definition:

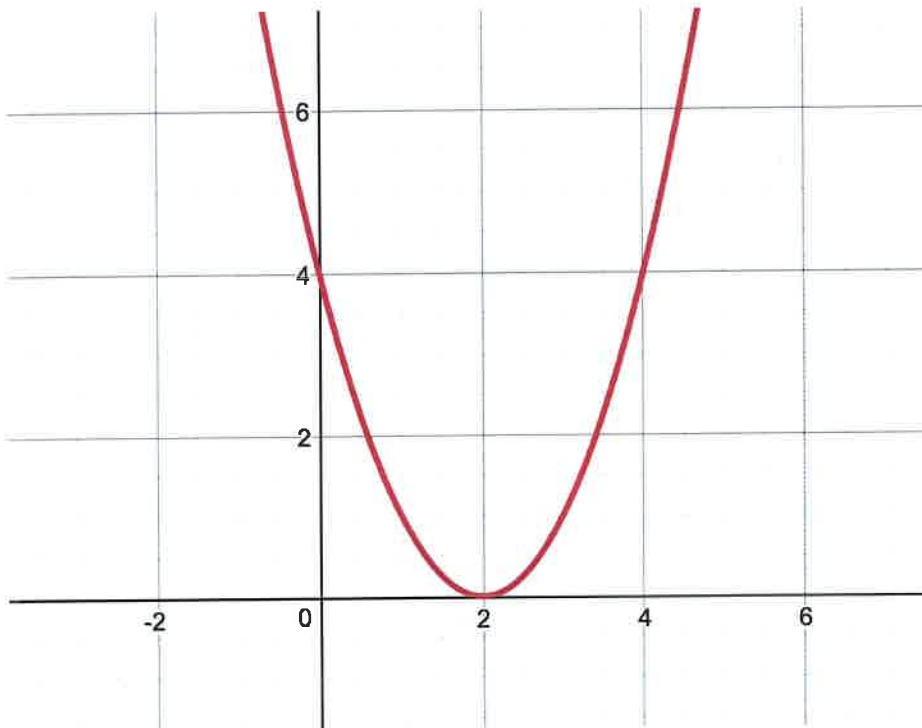
Parametric equations are a pair of equations that define x and y as a function of another variable called a parameter.

$$x = f(t) , y = g(t)$$

Plot the curve defined by the parametric equations below:

$$x = t + 2$$

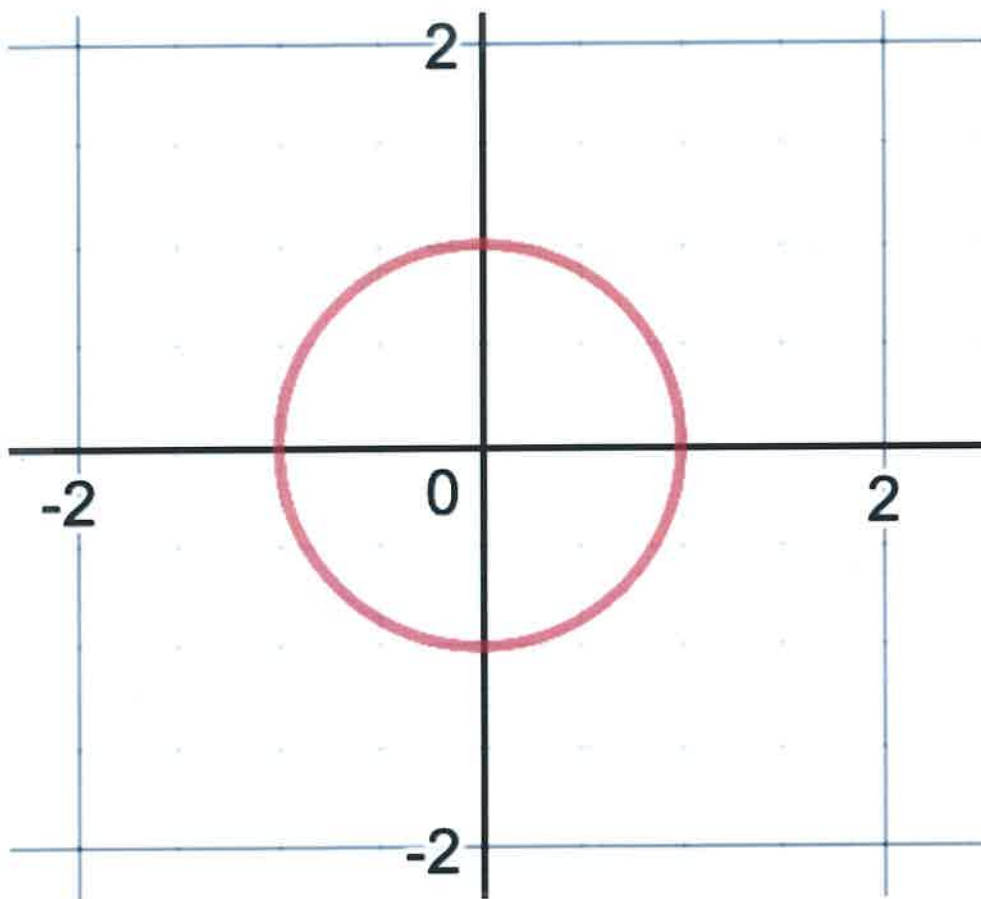
$$y = t^2$$



Plot the curve defined by the parametric equations below:

$$x = \cos t \quad 0 \leq t \leq 2\pi$$

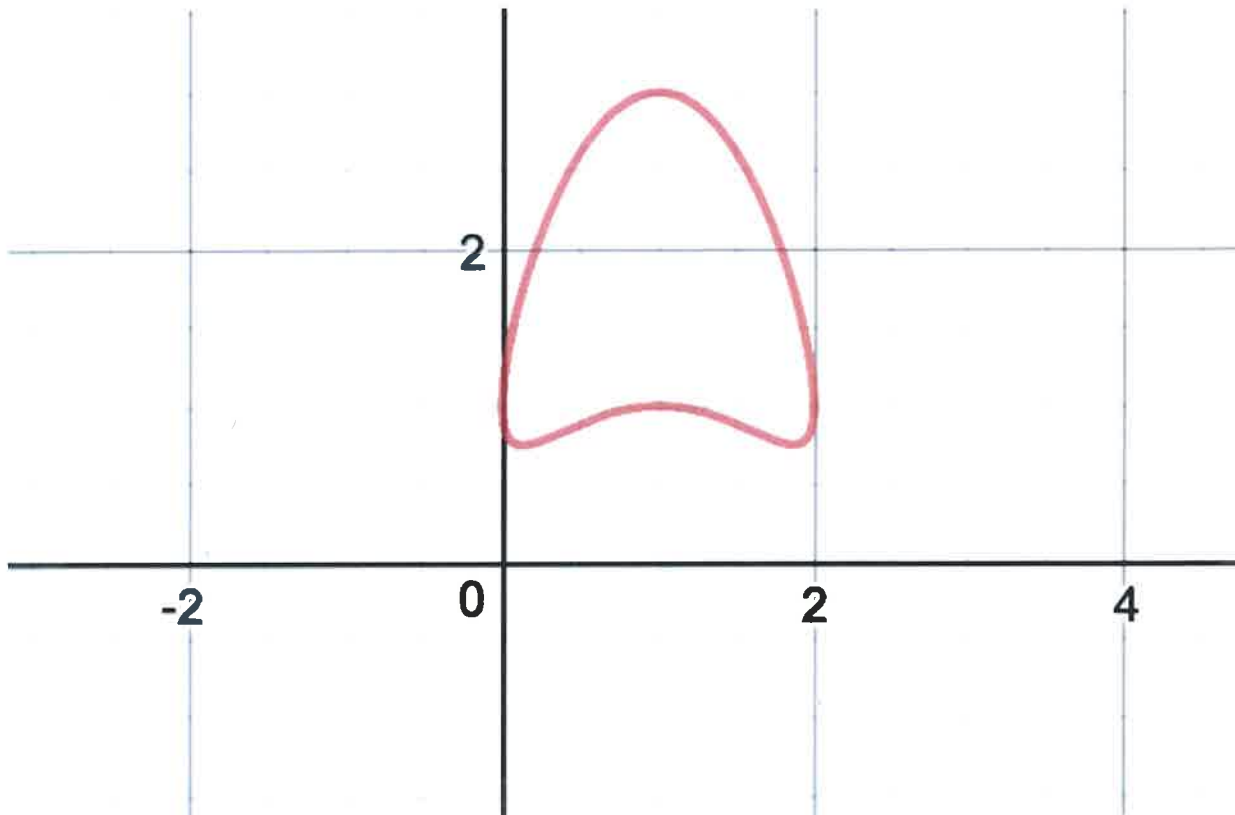
$$y = \sin t$$



Plot the curve defined by the parametric equations below:

$$x = \cos \theta + 1$$

$$y = \sin^2 \theta + \sin \theta + 1$$



Plot the curve defined by the parametric equations below:

$$x = 5 \sin t \quad 0 \leq t \leq 2\pi$$

$$y = 2 \cos t$$

