TOPIC: GRAPHING PARAMETRIC EQUATIONS
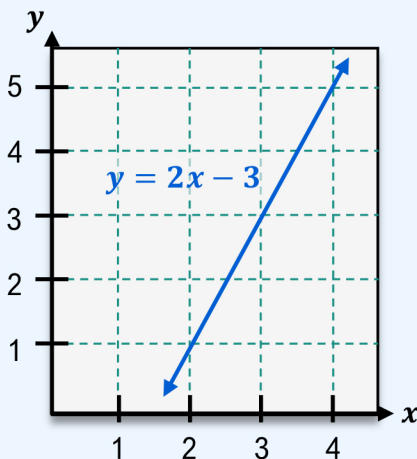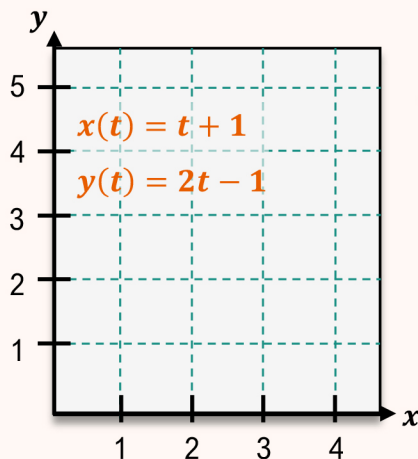
Introduction to Parametric Equations

◆ **Parametric Equations** express *two* variables (x & y) in terms of a _____ (usually t), called the **parameter**.

▸ To graph, make a table of values with ___, x, & y.

EXAMPLE   Graph the equations.

Recall	**Two-Variable Equations**	New	**Parametric Equations**

[1 | 2 | 3] equation(s)

[1 | 2 | 3] variable(s)

$y = 2x - 3$

x	y
2	1
3	3
4	5

[1 | 2 | 3] equation(s)

[1 | 2 | 3] variable(s)

$x(t) = t + 1$
$y(t) = 2t - 1$

t	$x(t)$	$y(t)$
1		
2		
3		

◆ Graphs of parametric eq'ns are called **plane curves**. Indicate orientation with arrows along direction of ___ t.
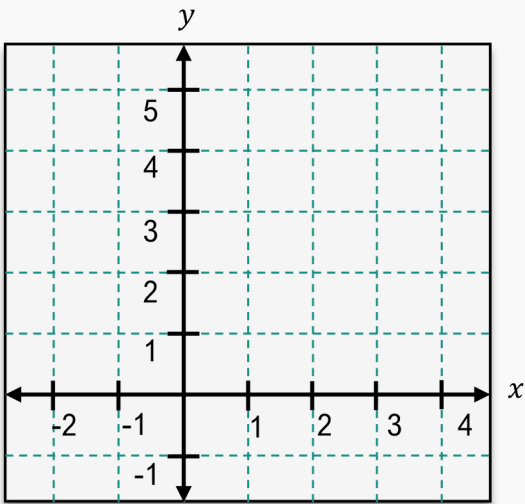
TOPIC: GRAPHING PARAMETRIC EQUATIONS

PRACTICE   Graph the plane curve formed by the parametric equations and indicate its orientation.
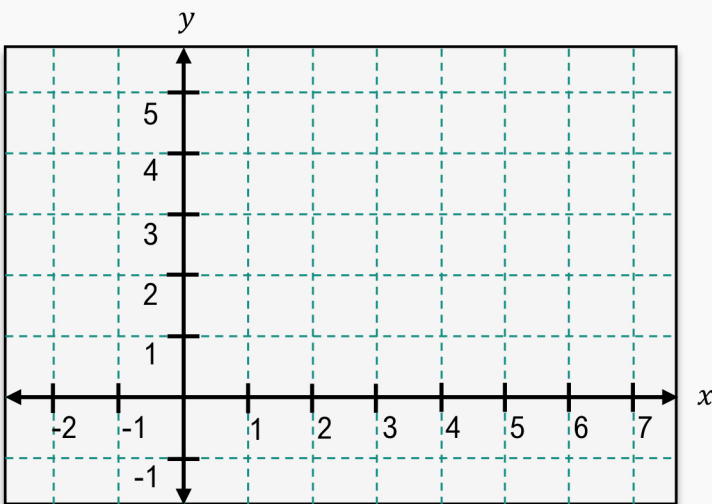
$$x(t) = -t + 1; \qquad y(t) = t^2$$

$$-2 \le t \le 2$$

t	x	y

PRACTICE   Graph the plane curve formed by the parametric equations and indicate its orientation.

$$x(t) = 2t - 1; \qquad y(t) = 2\sqrt{t}$$

$$t \ge 0$$

t	x	y