4.4 Parametrically Defined Circles and Lines

AP Precalculus Name: _____ **CA #1**

1. Find the parametric equations for the circle with the center at $(-5, 2)$ and a radius of 2.

2. Find the parameterization for the linear path of a particle that travels from the point $(-3, 3)$ to the point $(2, 5)$.

3. Which of the following could be the equation of the circle with the parametric equations $x(t) = -3 + 5\cos t$ and $y(t) = -1 + 5\sin t$?

   (A) $(x-3)^2 + (y-1)^2 = 25$

   (B) $(x+3)^2 + (y+1)^2 = 5$

   (C) $(x-3)^2 + (y-1)^2 = 5$

   (D) $(x+3)^2 + (y+1)^2 = 25$

4. Find the parametric equations for the line with a slope of $\frac{3}{4}$ and initial point $(1, 2)$.

5. Create a table of numerical values for a line given by the parameterization $x(t) = 5 + 2t$ and $y(t) = 2 + 3t$ for $0 \le t \le 2$.

t	0	1	2
x			
y			

Answers to 4.4 CA #1

1. $x(t) = -5 + 2\cos t$, $y(t) = 2 + 2\sin t$
2. $x(t) = -3 + 5t$, $y(t) = 3 + 2t$
3. D
4. $x(t) = 1 + 4t$, $y(t) = 2 + 3t$
5.

2	5	8
5	7	9