4.7 Parametrization of Implicitly Defined Functions

AP Precalculus Name: _____ **CA #2**

For each problem, identify the parametrization of each rectangular equation.

1. $y = x^2 - 2x + 1$, by letting $x(t) = 2t + 1$.

(A) $(2t + 1, 4t^2)$

(B) $(2t + 1, 4t^2 + 4)$

(C) $(2t + 1, 4t^2 - 4t - 2)$

(D) $(2t + 1, t^2 - 2t + 1)$

2. $y^2 - 3y - x = 0$

(A) $(t^2 - 3y, t)$

(B) $(t, y^2 - 3y)$

(C) $(t - 3, t^2)$

(D) $(3 - t, t^2)$

Find the parametrization of the given equations.

3. $\frac{(x+2)^2}{4} + \frac{(y-1)^2}{25} = 1$

3. $\frac{y^2}{9} - \frac{(x-1)^2}{36} = 1$

5. Which of the following represents a parametrization of the ***inverse*** of the equation given by $x = \sqrt{y - 4}$?

(A) $(t, \sqrt{t - 4}), t \geq 4$

(B) $(\sqrt{t - 4}, t), \ t \geq 4$

(C) $(t^2 - 4, t), t \leq 4$

(D) $(t^2 - 4, t), t \geq 4$

Answers to 4.7 CA #2

1. A	2. A	3. $x(t) = -2 + 2\cos t$ $y(t) = 1 + 5\sin t, 0 \leq t \leq 2\pi$	4. $x(t) = 1 + 6\tan t$ $y(t) = 3\sec t, 0 \leq t \leq 2\pi$	5. A

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