MAC2312: Calculus 2 - Section 3

Quiz 13: 10.2 Calculus with Parametric Curves — July 7, 2015

1. Find the point on the curve with parametric equations $x = t^3 - t$, $y = t^2 - 3$ where the tangent is horizontal.

   A. $(0, -3)$

   B. $(-3, -3)$

   C. $(2, -2)$

   D. $(-2, -2)$

$$\frac{dy}{dx} = \frac{\frac{dy}{dt}}{\frac{dx}{dt}}$$
$$= \frac{2t}{3t^2 - 1} = 0 \Rightarrow t = 0 \Rightarrow (x, y) = (0, -3)$$