

1. Consider the curve defined parametrically by $x = 2t^2 + 1$ and $y = 3t^3 + 2$. Find the equation for the line tangent to the curve at time $t = 1$.
2. A curve C is defined by the parametric equations $x = t^2 - 4t + 1$ and $y = t^3$. Find the equation of the line tangent to the graph of C at the point $(-2, 27)$?
3. A curve C is defined by the parametric equations $x = t^2 - 4t + 1$ and $y = t^3$. Determine the times that the curve has a horizontal tangent and a vertical tangent.