

Calculus

Finding the Derivative

1. Find the slope of the tangent to $y = \sqrt{x^2 - 25}$ at $x = 13$.

2. Determine the equation of the tangent to $y = \frac{5}{x-4}$ at $x = -6$.

3. Find the equation of the tangent line to $y = \frac{-4}{x^2+1}$ at the point $(1, -2)$.

4. Find the equation of the tangent line and the normal line to $f(x) = \sqrt{5-x}$ at the point $(1, 2)$.