

(1) [7] Find an equation of the tangent line to the curve

$$y = \ln(x^2 - 3x - 3)$$

at the point where $x = 4$.

(2) [4] Determine the derivative of

$$f(x) = (x^2 + 1) \ln(2x + 1)$$

(3) [4] Solve for x :

$$\ln(-x) = \ln(x^2 - 6)$$