Quiz 3

Oct 28 2003, 11:30 AM - 12:00 AM

Show all details.

(1) (40 pts) Graph the function $y = (x^2 - 3)/(2x - 4)$. Indicate all the asymptotes, critical points and inflection points, if any.

(2) (20 pts) Find the minimal distance between $y = \sqrt{x}$, $x \geq 0$ to the point $(1, 0)$.

(3) (20 pts) Find the derivative of $y = 2^{x/\sqrt{x^4+1}}$.

(4) (20 pts) Let $f(x) = x^3 - 3x^2 - 1$, $x \geq 2$. Find the value of $df^{-1}(y)/dy$ at $y = -1 = f(3)$. (or, if you prefer, find the value of $df^{-1}(x)/dx$ at $x = -1 = f(3)$.)

Calculus, Fall 2003

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