

MATH 104 Quiz 3a PRINT NAME _____



January 27, 2006 SIGNATURE _____

(6) 1. Find the value k so that the function $y = f(x) = \begin{cases} 3x + 5 & \text{if } x \leq 3 \\ kx^2 - 4 & \text{if } x > 3 \end{cases}$ is continuous for all x .

(3) 2. Write down the equation of a rational function with vertical asymptotes at $x = -1$ and $x = 3$ and a horizontal asymptote at $y = 5$.

(6) 3. Evaluate $\lim_{x \rightarrow 2} \frac{x^3 - 2x - 4}{x - 2}$.