

Math 16A (Summer 2007)
Kouba
Quiz 3

PRINT Name : -----

Exam ID # : -----

1.) (12 pts.) Use a Three-Step Process to determine if the following function is continuous at $x = 1$.

$$f(x) = \begin{cases} x^2 + 2x, & \text{if } x \leq 1 \\ 3 - x^2, & \text{if } x > 1 \end{cases}$$

2.) Consider the function $f(x) = \frac{x^2}{x^2 - 9}$

a.) (4 pts.) Use limits to determine all horizontal asymptotes (H.A.).

b.) (8 pts.) Use limits to determine all vertical asymptotes (V.A.).

c.) (6 pts.) Use x - and y -intercepts and the above information to sketch a graph of f .