Quiz

Math 101

Name:

Computer no.:

Choose the correct answer:

1- If $f(x) = \frac{\sqrt[3]{2x+1}}{\sqrt[3]{2x}+2}$, then D_f =

(a) R (b) R ?á?4â (c) R ? á?2â.

2- The function ßßxàà is ..... at 3^+

(a) continuous. (b) discontinuous. (c) neither.

3- The function $f(x) = \sqrt{\frac{x^2?1}{x^4}}$ is an :

(a) odd. (b) even. (c) neither.

4- The function $\sqrt[3]{x+2}$ has

(a) infinite number of vertical asymptote (b) only one vertical asymptote, namely x = ?2 (c) no vertical asymptote.

5- The function $f(x) = \frac{1}{x^8}$ is

(a) a decreasing. (b) an increasing. (c) neither.

Put True or False in front of the following sentences:

1-( ) If $\lim_{x,a} f(x) = ?3$ and $\lim_{x,a} g(x) = 0$, then $\lim_{x,a} \frac{f(x)}{g(x)}$ does not exist.

2-( ) $\lim_{x,9^+}$ (ßßx + 1àà + $\sqrt{x ? 9}$) = 9.

3-( ) If f is differentiable at a, then $\lim_{x,a} f(x) = \lim_{x,a^+} f(x) = f(a)$.

4-( ) $(f ? \frac{g}{h})' = f' + \frac{h'g ? g'h}{h^2}$.

5-( ) $\lim_{x,0?} \sqrt{?x}$ does not exist.

If $f(x) = \frac{(1 + x)^{?2} ? 1}{x}$, **then find** $\lim_{x,0} f(x)$.