

## Math101-Quiz(1A)

Name:.....

ID #:.....

Sec #:.....

(SHOW ALL YOUR WORK, BIG 0 WITH SMILE WILL BE GIVEN FOR A NON-DETAIL WORK)

(1) Find the limit, if it exists

(7pts)

(a)  $\lim_{x \rightarrow +\infty} (-2x - 1)^4(x - 1)^3(x + 2)$

(b)  $\lim_{t \rightarrow 0} \frac{\sqrt{t^2+9}-3}{t^2}$

(c)  $\lim_{x \rightarrow -\infty} \frac{\sqrt{2x^2+1}}{3x-5}$

(2) (a) Given that  $\lim_{x \rightarrow -\infty} e^x = 0$ , Evaluate  $\lim_{t \rightarrow 0^-} e^{\frac{1}{t}}$  (2pts)

(b) Explain what it means to say that  $\lim_{x \rightarrow -3} f(x) = +\infty$  (1pt)

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