KFUPM MATH101 Quiz#2 Sec. 1

Name Sr.#

1) Given $f(x) = \sqrt{2-x}$, the largest number $\delta > 0$, such that if $0|x+2| < \delta$, then $|f(x) - 2| < 1$, is equal:

2) **Q2** Show that the equation $sinx = 4 - x - 3\sqrt{x}$ has at least one real solution between 0 and 1.

3) Find the horizontal and vertical asymptotes of the curve $y = \frac{\sqrt{2x^9+x^3}}{-3x^3+x-1}$

4) Evaluate $\lim_{n\to-\infty} [\ln(2-3x^3) - \ln(x^2-2x^3)]$