KFUPM Math101 Quiz#5 Sec.#12

Name: Serial#:

Q1. If $f(t)=\dfrac{9t}{t^2+9}$, $f'(t)=\dfrac{-9(t^2-9)}{\left(t^2+9\right)^2}$, $f''(t)=\dfrac{18t(t^2-27)}{\left(t^2+9\right)^3}$

When the particle slow down?

Q2.

13. A plane flying horizontally at an altitude of 1 mi and a speed of 500 mi/h passes directly over a radar station. Find the rate at which the distance from the plane to the station is increasing when it is 2 mi away from the station.

Q2. Find the limit $\lim_{x \to 0} \frac{sin2x}{2x - tanx}$