

Math 101-181-Sec.19 Quiz #4

Name:

ID:

SR:

Q.1: If $f(x) = 2x + a, x < 1$ and $\frac{df^{-1}}{dx}$ when $x = 3 = f(0)$ is $-\frac{1}{4}$. Find the value of a

Q.2: If $x^4 + y^4 = 1$. Show that $y'' = -3\frac{x^2}{y^7}$

Q.3: If $f(x) = (x + 1)^{\sqrt{x+1}}$, find $f'(3)$

Q.4. A particle is moves with a position function $S(t) = \sin(\pi t) + \cos(\pi t)$ $t \geq 0$, wher t is measured in seconds and S in meters. Find the total distance travelled by the particle during the time $0 \leq t \leq 1$.