quiz 10
math1117.02
u new haven
fri, 18 oct

name: Solution

1 (2 points each). Find the derivatives of the following functions.

(a) $f(t) = t$
(b) $g(x) = e^3$
(c) $g(w) = \frac{5}{6}w^{12}$
(d) $f(s) = \frac{\sqrt{s}}{4}$
(e) $g(x) = 6x^5 - \frac{5}{2}x^2 + x + 5$

(a) $f'(t) = 1$

(b) $g'(t) = 0$

(c) $g'(w) = \frac{5}{6}(12 \cdot w^{11}) = 10w^{11}$

(d) $f(s) = \frac{1}{4}s^{1/2}$

$f'(s) = \frac{1}{4}\left(\frac{1}{2}s^{-1/2}\right)$

$= \frac{1}{8\sqrt{s}}$

(e) $g(x) = 30x^4 - 5x + 1$