

1. (2 points each) **True or False.** Circle True only if the statement is always true.

(a) The inverse function of $g(t) = (1.04)^t$ is $g^{-1}(t) = \frac{1}{(1.04)^t}$. T F

(b) $\ln(2^x + 2^{-x}) = 0$ T F

(c) If $22 = 18e^{2k}$, then $k = 1.003$. T F

(d) $\log(67.34(1.03)^t) = t(\log(67.34) + \log(1.03))$ T F

(e) The graph of the function $s(t) = 2 \sin(2t + 3)$ is the graph of the function $y = 2 \sin(2t)$ shifted 3 units to the left. T F

(f) If f' is increasing, then f is increasing. T F

2. (6 points) A function $f(x)$ has values given in the following table. Estimate the value of its derivative at $x = 1$.

x	.9	.98	.996	1.0	1.004	1.02	1.1
$f(x)$.7969	.8342	.8410	.8427	.8444	.8508	.8802