

Name: _____

Score: _____

1. Let $f(x) = 2x + 1$, $g(x) = \ln x$, $h(x) = \frac{1}{x}$. Compute each of the following functions, then sketch their graphs. (2 points each)

(a) $h \circ f$

(b) $g \circ f^{-1}$

(c) $g \circ h \circ f$

2. Simplify the following expressions. (1 point each)

(a) $\ln((e^a)^2)$

(b) $\cos(a + b) - \cos(a - b)$

(c) $\frac{\sqrt{2\sqrt{a}}}{\sqrt[3]{2a}}$

(d) $4^{\log_2 a}$