13, 14, 16

(13) $f(x) = \sqrt{x^2+6x}^{(x^2+6x)^{1/2}}$ $x \geq 0$ $b = 4$

$\sqrt{x^2+6x} = 4$

$x^2+6x-16 = 0$

$(x+8)(x-2) = 0$

$x = 2$

So, $f(2) = 4$

So, $g(4) = 2$

$g'(4) = \frac{1}{f'(2)} = \frac{4}{5}$

$f'(x) = \frac{1}{2}(x^2+6x)^{-1/2} \cdot (2x+6)$

$= \frac{x+3}{\sqrt{x^2+6x}}$

$f'(2) = 5/4$

(16) $f(x) = e^x$ $\quad b = e$

$y = e^x$

$x = e^y$

$\ln x = \ln(e^y) = y = g(x)$

$\ln(e^5) = 5$

$g(e) = \ln e = 1$

$g'(x) = \frac{1}{x} \quad g'(e) = \frac{1}{e}$