

7. [16 points] Let $f(x) = \ln(x)$. Use the table of values below for $g(x)$ and $g'(x)$ to answer the following questions.

x	2	3	4
$g(x)$	1	4	6
$g'(x)$	5	3	2

- a. [4 points] If $F(x) = f(g(x))$, find $F'(4)$.

- b. [4 points] If $G(x) = g^{-1}(x)$, find $G'(4)$.

- c. [4 points] If $H(x) = \tan(g(x))$, find $H'(3)$.

- d. [4 points] If $E(x) = e^{f(x)g(x)}$, find $E'(2)$.