3. (9 points) Use the information given in the table to find $h'(4)$ if:

x	1	2	3	4
$f(x)$	2	1	4	2
$f'(x)$	3	2	-1	2
$g(x)$	4	2	1	3
$g'(x)$	3	2	2	-3

(i) $h(x) = g(x)/f(x)$; $h'(4) =$ _____

(ii) $h(x) = f(\sqrt{x})$; $h'(4) =$ _____

(iii) $h(x) = \ln(g(x))$; $h'(4) =$ _____

4. (9 points) **(a)** On what interval(s) is the function $f(x) = e^{-x^4}$ increasing and concave down?

ANSWER: f is increasing and concave down on the interval(s):

_____