5. (8 points) Below is a table of values for two functions f and g.

x	-2	-1.5	-1	-0.5	0	0.5	1	1.5	2
$f(x)$	-0.16	-0.284	-0.5	-0.64	0	0.64	0.5	0.28	0.16
$g(x)$	-0.88	-1.0888	-1	0.32	2	0.32	-1	-1.088	-0.88

Use the table to answer the following:

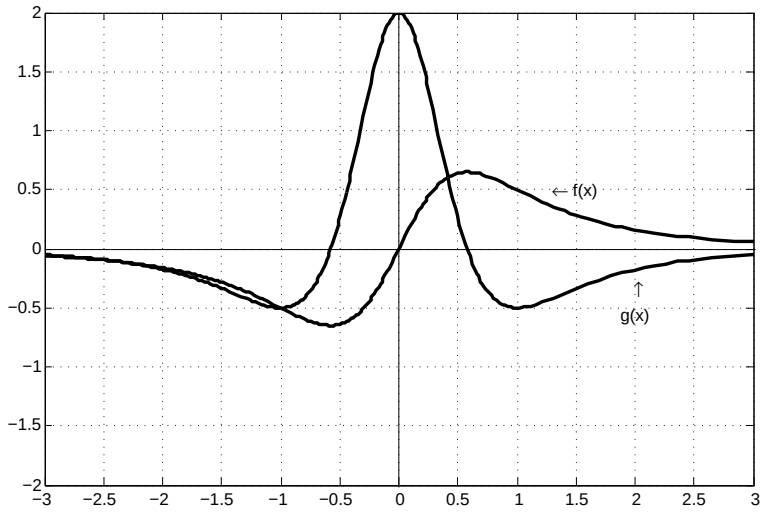
(a) $g(f(-1))$ $= g(-0.5) = 0.32$

(c) $f(g(0))$ $= f(2) = 0.16$

(b) $3g(-1.5)$ $= 3(-1.0888) = -3.2664$

(d) $g(2)f(-1)$ $= -0.88(-0.5) = 0.44$

Below is a plot of the functions f and g.



(e) Circle ***ONE*** of the following

$f(x) = g'(x)$ **or** $\boxed{g(x) = f'(x)}$,

AND explain your reasoning below.

The function f cannot be the derivative of g, because g is increasing for $x = -1$ to $x = 0$ (for example), and f is negative there. On the other hand, g is negative when f is decreasing, zero when f changes from decreasing to increasing (near $x = -0.5$), then positive when f is increasing, etc. Thus, g is the derivative of f.