Calculus Worksheet: Functions and Derivatives Given By Tables (1)

Functions f and g and their derivatives are defined in the table below

x	f	g	f'	g'
-1	3	- 4	0.5	3
0	5	- 4	2	0
1	0	3	4	6

a) If $H(x) = g^3(x)f(x)$, calculate $H(0)$.

$$H(0) = g^3(0) \cdot f(0) = (-4)^3 \cdot 5 = -320.$$

b) If $M(x) = 2f^{-1}(x) + g(x)$, calculate $M(0)$.

$$M(0) = 2f^{-1}(0) + g(0)$$

$$f(1) = 0 \implies f^{-1}(0) = 1.$$

Hence : $M(0) = 2 \cdot (1) + (-4) = \underline{-2}$