

If $f(x) = (x^2 - 2)(3x^3 + 1)$ then (the derivative of $f(x)$) $\hat{f}(x) =$

- a. $15x^4 - 18x^2 + 2x$ b. $-15x^4 - 18x^2 + 2x$
c. $3x^4 + 18x^2 + 2x$ d. $(2x)(9x^2)$

If $f(x) = \frac{x^2-2}{x^2-x}$ then (the derivative of $f(x)$) $\hat{f}(x) =$

- a. $\frac{4x^3-3x^2-4x+2}{(x^2-x)^2}$ b. $-\frac{x^2+4x-2}{(x^2-x)^2}$
c. $-\frac{x^2+4x-2}{(x^2-x)}$ d. $\frac{-x^2+4x-2}{(x^2-2)(x^2-x)}$

If f and g are differentiable functions and

$$h(x) = f(x) \cdot g(x), \quad f(0) = 1, \quad \hat{f}(0) = -2, \quad g(0) = 3, \quad \hat{g}(0) = 4$$

Find $\hat{h}(0)$?

- a. -10 b. 2
c. 10 d. -2