

Name _____

MATH 2471

Homework Assignment

Consider $f(x) = 3x^2 + 2x + 2$. Show all your work and simplify each expression.

Find:

a. $f(-1)$

b. $f(-1+h)$

c. $f(-1+h) - f(-1)$

d. $\frac{f(-1+h) - f(-1)}{h}$

e. Use some of steps a. through d. to find $\lim_{h \rightarrow 0} \frac{f(-1+h) - f(-1)}{h}$

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Find the derivative of $f(x) = x^3 + 5x^2 - 17$

Find the derivative of $g(x) = \cos(x)$.

Find the derivative of $h(x) = \cos(x^3 + 5x^2 - 17)$.