

ARC, Formal Definition of Der.

Date _____ Period _____

For each problem, find the average rate of change of the function over the given interval.

1) $y = 2x^2 + 2$; $[0, 1]$

2) $y = -x^2 - 2x - 1$; $[-1, 0]$

3) $y = -\frac{1}{x+1}$; $[0, \frac{1}{2}]$

4) $y = -\frac{1}{x+2}$; $[0, \frac{1}{2}]$

Use the definition of the derivative to find the derivative of each function with respect to x .

5) $f(x) = 5x - 4$

6) $f(x) = x^2 - 1$

7) $f(x) = -2x^2 + 5x - 1$

8) $f(x) = -4x + 3$