

1. How do you find average rate of change?
2. How do you find instantaneous rate of change?
3. Use the original limit definition of derivative to find the derivative of each of the following.

a)  $f(x) = x^3 + x$

b)  $f(x) = \sqrt{x + 2}$

4. Use the alternative definition of the derivative to find the derivative of each of the following.

a)  $f(x) = \frac{1}{2x - 3}$

b)  $f(x) = 4 + 2x + x^2$  at  $x = 3$ .

