Interpreting Derivatives

Derivatives tell you how fast a function is changing (increasing or decreasing) at a given moment in time...

Given the function f(x) then the derivative f'(x) can generally be interpreted.....

When _____ the Function is increasing/decreasing at a rate of f'(x) units/ x

Example 1: Given the revenue function R(x) where x is units produced and sold. R'(3) = 8 could be interpreted as:

When the 3rd unit is sold the revenue is increasing at a rate of 8 dollars/unit

Example 2: Given a population function P(x) for a certain city, where x is the years since 1980 and P(x) is the population of people in hundreds. P'(7) = -57 could be interpreted as....

In 1987, the population is decreasing at a rate of 5700 people/year