Derivative Applications
3.5 – Interpretations

#1)
F(x) = the temperature of oil at time x
x = time in hours

Interpret F ’(5) = 12

#2)
P(x) = population of a town after x weeks
x = number of weeks

Interpret P ‘(13) = 120

#3)
G(x) = number of words a person can memorize in x minutes
x = number of minutes

Interpret G’(14) = 5

#4)
h(x) = the number of cars sold on day x of advertising
x = number of days of advertising

Interpret h’(7) = 13

#5)
B(x) = the number of bacteria in a culture x hours after patient was given an antibiotic
x = number of hours

Interpret B’(5) = -100,000

#6)
P(x) = total profit from selling x computer chips
x = number of computer chips
AP(x) = average profit per unit
AC(x) = average cost per unit

Interpret P’(70) = 50

Interpret MAP(70) = 4

Interpret MAC(70) = -0.25

Derivative Applications
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#7)
H(x) = amount of sulfur dioxide pollution measured in parts per minute
x = miles downwind from the plant

Interpret H'(2) = -2000

#8)
A(t) = cross sectional area, measured in square centimeters, of a blood vessel *t* hours after a nitroglycerine is administered
t = hours after nitroglycerine is administered

Interpret A'(4) = .10

#9)
W(t) = weight of a typical hailstone (in ounces) that remains in a cloud for t minutes
t = the number of minutes hailstone is in cloud

Interpret W'(2) = 3

#10)
P(t) = the number of phrases a student can memorize in t hours
t = number of hours

P'(4) = 12

#11)
P(n) = total profit from selling n X-Box 360s.
n = number of X-Box 360s
AP(n) = average profit per unit
AC(n) = average cost per unit

Interpret P'(700) = 100

Interpret MAP(700) = 12.50

Interpret MAC(700) = -2.22