

6. (9 points) You feel that you need to escape the cold climate before you return to school, so you decide to drain your savings account and head for somewhere warm and tropical. However, the cost of airline tickets seems to vary from day to day, moment to moment. At the egg nog party you meet a person who works in airline ticket pricing. He actually gives you a web site where you can check out the rate at which the cost of tickets on your preferred airline is changing at any given moment on a given day. (At this site, the rate of change is defined for all times, t .)

(a) If the rate of change is negative, would you be inclined to buy or wait? Why?

If the rate of change is negative, at this moment the ticket price is decreasing so you should wait.

(b) If the rate of change is equal to zero, what would that mean? Explain.

If the rate of change is zero then the ticket price is not changing at this moment. It could mean that the price function is at a max or min, or that the price is constant over a period of time.

(c) If you could get the formula for the data generated on the web site, would that help you to decide what to do in the case of part (b)? If so, how? If not, why not?

It would definitely help you as you could find a global minimum and then purchase the ticket at that price.