

# The concentration of co<sub>2</sub> in the atmosphere assignment



**ASSIGN  
BUSTER**

Carbon dioxide (CA) is a colorless, odorless, non-flammable gas that can be produced by cellular respiration and burning of fossil fuels. Many types of industries such as breweries, mining ore and the manufacturing of carbonated drinks, drugs, disinfectants, pottery, and baking powder; utilize the CA gas (Appendix C). Recently Scientist proposed a theory in which CA concentration levels above pump will lead to dramatic and potentially catastrophic climate changes.

Rising temperatures and damages to the Earth's outer atmosphere can easily be avoided by keeping CA levels as low as possible. To begin the research I was given the original ADS model that illustrated the CA concentration levels in PUMP. The ADS consisted of an initial condition of  $P_{APPY} = 315.97$  and a recursion equation of  $P_{an} = (.97) * P_{an-1} + D$  where  $P_{an}$  equals the amount of CA in PUMP within the Earth's atmosphere at year  $n$ . I was also given a ADS model and an excel sheet that illustrated the average annual concentration collected from Manna Lola, Hawaii.

As shown in the excel spreadsheet of Manna La's CA concentration levels the PUMP value constantly rose. I can only infer that the growing demand for cars and other vehicles created more demand for fuel. The fuel that is burned to run the car create CA gas and release it into the air. The ADS model that I created to keep the levels of CA concentrations level with the concentrations in Manna Lola consisted of an initial condition of  $P_{I959} = 315.97$ , where the  $I$  in  $P_i$  represented the first year that scientists started testing for carbon dioxide levels and the recursion equation of  $P_{an} = (.97) * P_{an-1} + 12.22$ , displays that Carbon dioxide levels are going to constantly increase up until a certain equilibrium value that I found to be 407.3 pump of Carbon

<https://assignbuster.com/the-concentration-of-co2-in-the-atmosphere-assignment/>

Dioxide, because the a and d value are both positive. I chose the values of .97 for my A value and 12.22 for my D value because these values accurately displayed the graphs calculated an equilibrium value that didn't exceed the value 450 pump of CA which was 407.3, and in unison so all in all it was through a series of trial and error that I was able to produce my A and D values. Table 1.

Time Series scatter plot of the amount of CA concentration in the atmosphere over (n) amount of years. The recursion equation is given by  $P_n = (.97)P_{n-1} + 12.22$  the initial condition is  $P_0 = 315.97$ . As the scientists have articulated, Carbon dioxide levels above 450 pump is dangerous and can very likely put the world in imminent danger. The equilibrium I was able to find from my ADS and excel spreadsheet of 407.3 indicates that the Carbon Dioxide levels will not succeed 407.3 and therefore never reach the proposed limit of 450 pump. To move on in the