

Homework: Population Growth

1. A population of a small city had 7,000 people in the year 2012 and has grown at a rate proportional to its size. In the year 2018 the population was 7,500.
 - (a) Estimate the population of the city in 2025.
 - (b) Assuming the growth continues at the same rate, when (the Year) will the city have 8,800 people?
2. Suppose a student carrying a flu virus returns to an isolated college campus of 2600 students. If it is assumed that the rate at which the virus spreads is proportional not only to the number P of infected students but also to the number of students not infected, determine the number of infected students after 10 days if it is further observed that after 4 days there are 50 infected people in the campus.