

Subject 17

SEQUENCES-FUNCTIONS

Please do not write on this exam paper and give it back at the end of the test

Exercise 1 :

An apartment complex has 400 apartments. If the rent is \$400 per month per apartment all the apartments will be rented. Each \$20 increase will produce 10 vacancies.

Let x denote the number of \$20 increase.

- 1) If there is one \$20 increase, what will be the number of rented apartments ?
- 2) If there is x \$20 increase, what will be the number of rented apartments in terms of x ?
- 3) Express the revenue R in terms of x
- 4) What is the largest revenue that the apartment complex can generate ?

Exercise 2 :

The population of a country has been steadily increasing at a constant rate of 1.8% per year. If the population was 2.7 million in 2015, what would the expected population be in the year 2030 (rounded to the nearest thousand)?

Vocabulary:

Vacancies: appartements vides (vacants)

rent: loyer

rented: loué

steadily: regularly