

Exercise 73

A city's population in the year 1960 was 287,500. In 1989 the population was 275,900. Compute the rate of growth of the population and make a statement about the population rate of change in people per year.

Solution

The rate of growth of the population is the slope of the line between the two points, (1960, 287 500) and (1989, 275 900). Use the slope formula.

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{275\,900 - 287\,500}{1989 - 1960} = \frac{-11\,600}{29} = -400$$

This means that every year the city population decreases by 400 people on average.