

Exercise 25

For the following exercises, consider this scenario: The number of people afflicted with the common cold in the winter months steadily decreased by 205 each year from 2005 until 2010. In 2005, 12,025 people were afflicted.

Find the linear function that models the number of people inflicted with the common cold C as a function of the year, t .

Solution

Because the number of people that have a cold decreases steadily, a linear function can be used to model it. The slope is -205 , the rate at which the number of people that have a cold increases. The initial number of people that have a cold is 12,025.

$$C(t) = -205t + 12\,025$$