

Exercise 12

On June 1st, a company has \$4,000,000 profit. If the company then loses 150,000 dollars per day thereafter in the month of June, what is the company's profit n^{th} day after June 1st?

[TYPO: Replace " n^{th} day" with " n^{th} day."]]

Solution

Because the company's rate of cash loss is constant, a linear function can be used to model the amount of cash they have.

$$y = mx + b$$

The initial cash is \$4,000,000.

$$y = mx + 4\,000\,000$$

The rate that the cash increases per day is $-150\,000$.

$$y = -150\,000x + 4\,000\,000$$

Therefore, the n^{th} day after June 1st, the amount of cash the company has is

$$y = -150\,000n + 4\,000\,000$$