

Exercise 6

Timmy goes to the fair with \$40. Each ride costs \$2. How much money will he have left after riding n rides?

Solution

Timmy's money can be modeled as a linear function.

$$M(x) = mx + b \tag{1}$$

b is the money that he starts with.

$$40 = m(0) + b = b \quad \rightarrow \quad b = 40$$

m is the slope, or the rate that Timmy's money increases.

$$m = -2$$

Therefore, the amount of money Timmy has is

$$M(x) = -2x + 40.$$

After n rides, he has

$$M(n) = -2n + 40.$$