

Exercise 68

At noon, a barista notices that they have \$20 in their tip jar. If the barista makes an average of \$0.50 from each customer, how much will they have in the tip jar if they serve n more customers during the shift?

Solution

Since the average tip from each customer is a constant, a linear function can be used to represent the amount of money in the tip jar. Start with the general equation for a line.

$$y = mx + b$$

b is the amount of money they start with: $b = 20$.

$$y = mx + 20$$

m is the slope, or the rate that the money in the jar increases from each customer: $m = 0.50$.

$$y = 0.50x + 20$$

Therefore, if they serve n more customers during the shift, the tip jar will have

$$y = 0.50n + 20$$

dollars.