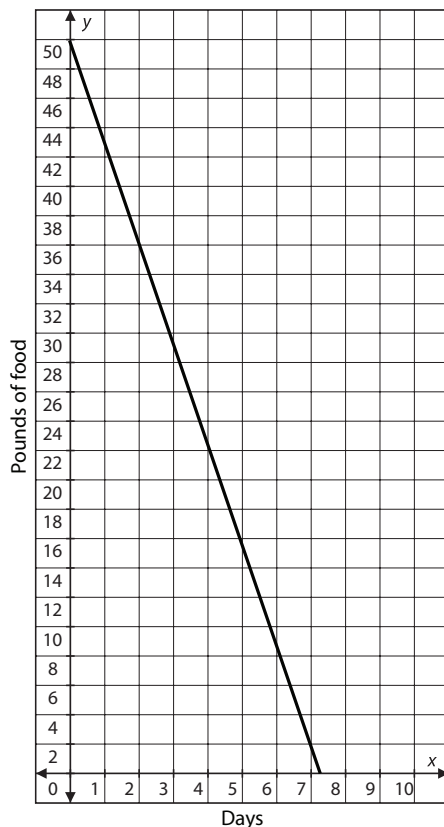## UNIT 2 • REASONING WITH LINEAR EQUATIONS AND INEQUALITIES
Lesson 10: Interpreting Linear Functions

Practice 2.10.1: Identifying Key Features of Linear Graphs   A

For problems 1 and 2, determine the domain of each function, then graph the function on graph paper.

1. Mikhail receives a base weekly salary of $350 plus a commission of $50 for each vacuum he sells. His weekly earnings can be modeled by the function $f(x) = 50x + 350$.

2. Lupita makes wicker chairs. She makes an average of 4 chairs per day, and she has made 200 chairs so far. Going forward, the number of chairs made can be modeled by the function $f(x) = 4x + 200$.

For problems 3–10, determine the key features of each function. Include the x- and y-intercepts, if they exist, and determine whether the function is increasing or decreasing, whether it's negative or positive, the minimum and maximum values, and the domain.

3. You and your friends are out hiking. You start the hike with 50 pounds of food for the group, and eat about 7 pounds each day. Identify the key features of the graph of this function.
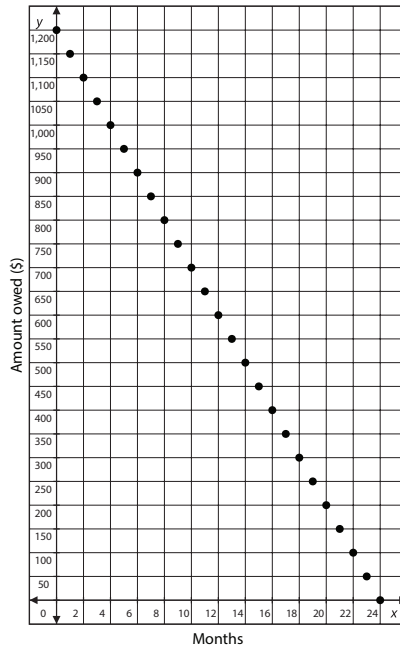

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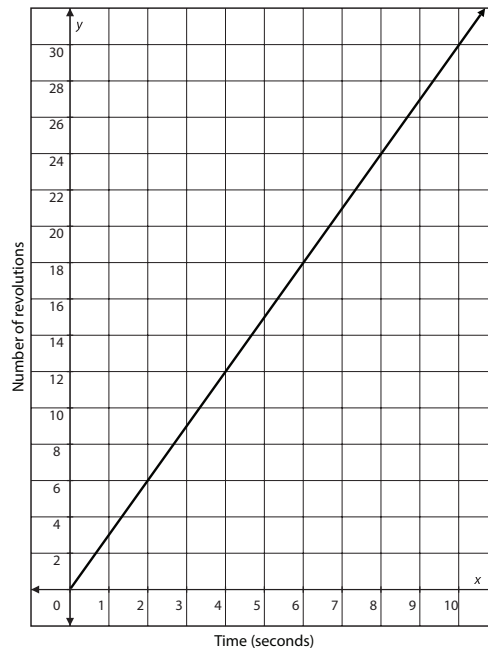4. Mason borrowed $1,200 from a friend to buy a new hot tub. His friend doesn't charge any interest and Mason makes $50 payments each month. Identify the key features of the graph of this function.

Months

5. A gear on a machine turns at a rate of 3 revolutions per second. Identify the key features of the graph of this function.
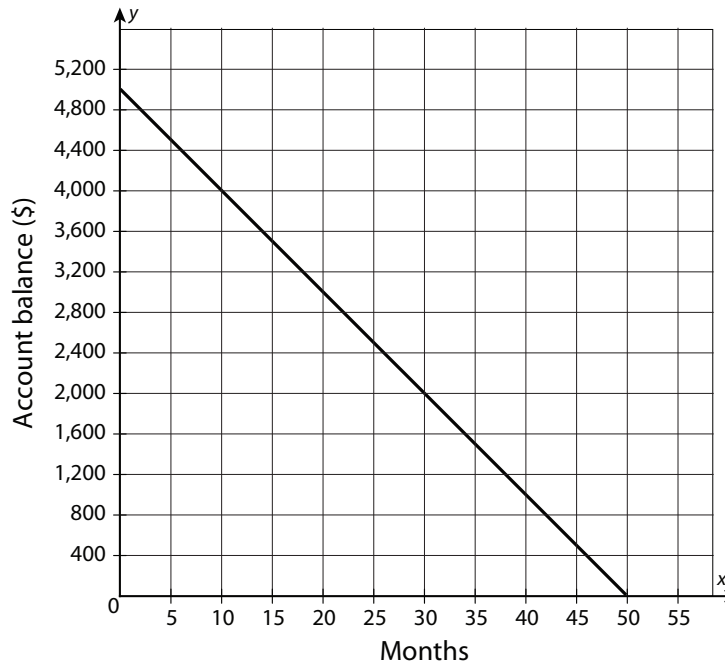

Time (seconds)

continued

6. The cost of an air conditioner is $110. The cost to run the air conditioner is $0.35 per minute. Identify the key features of this function.

Minutes (x)	Cost in dollars ($f(x)$)
0	110.00
30	120.50
60	131.00
90	141.50
120	152.00

7. Li is a student and has $5,000 in a checking account. He withdraws $100 every month to buy groceries and other necessities, until the account is empty. Identify the key features of the graph of this function.
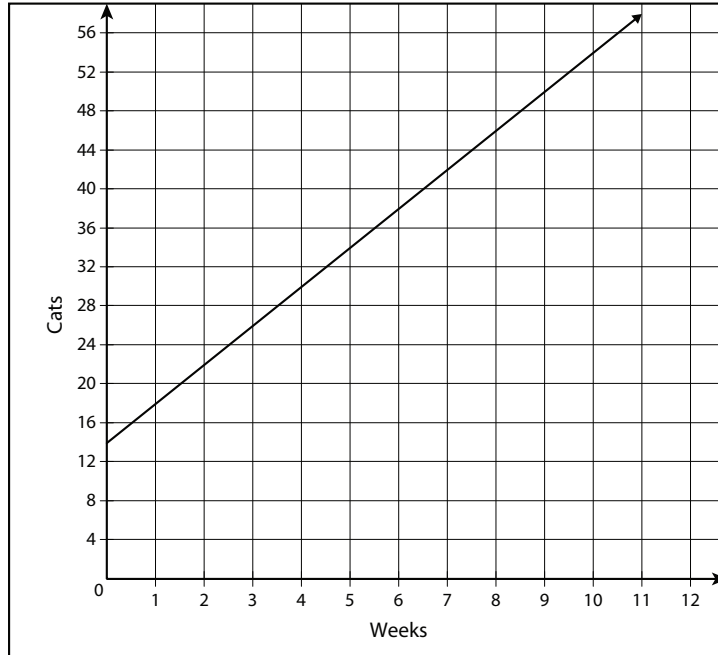

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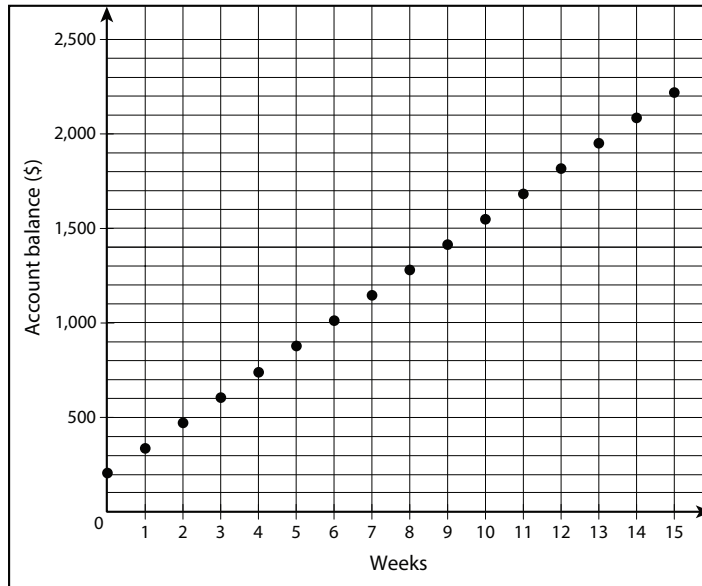8. An animal shelter had 14 cats at the beginning of the year. Since then, it has taken in 4 stray cats per week. Identify the key features of the graph of this function.

9. Terrance works part time and deposits $134.12 into his checking account every week. He began with $207.43 in the account. Identify the key features of the graph of this function.

UNIT 2 • REASONING WITH LINEAR EQUATIONS AND INEQUALITIES
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10. Konstantin deposits $15 into a checking account weekly. He began with $315 in the account. Identify the key features of this function.

Week (x)	Account balance in dollars ($f(x)$)
0	315
1	330
2	345
3	360
4	375
5	390
6	405