

Analyzing Linear Functions

1. Lin and her friend Thomas are collecting food for the local food bank. Their goal is to collect a total of 1785 pounds of food. They start with 225 pounds donated by a local grocery store. Their goal is to collect 20 pounds of food per day.

- a. Identify the independent and dependent quantities and their units in this situation. Then complete the table.

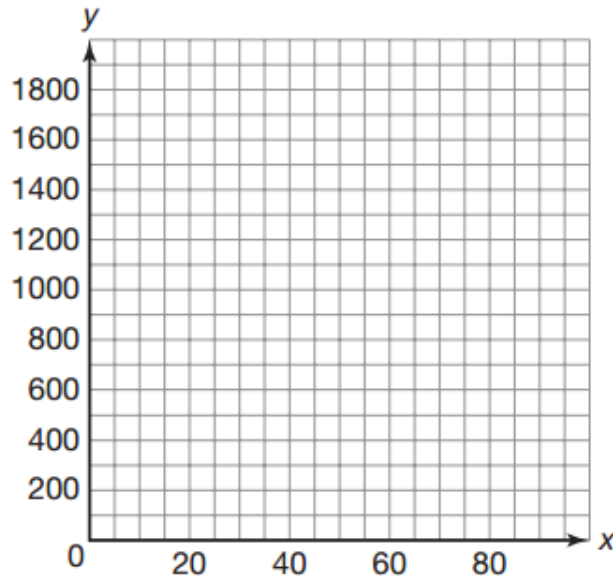
- b. Write a function $f(t)$ to represent this problem situation.

- c. Identify the slope and y-intercept. Then interpret their meanings in terms of the problem situation.

	Independent Quantity	Dependent Quantity
Quantity		
Units		
	0	
	10	
	15	
	25	
	48	1185
		1225
		1505
	t	

- d. Estimate the number of days it will take to collect 600 pounds of food.

- e. Graph the function $f(t)$ representing this problem situation on the coordinate plane. Don't forget to label your x and y -axis.



- f. Estimate the number of days it will take to collect 600 pounds of food using the graph.
- g. Algebraically determine the number of days it will take to collect 600 pounds of food.
- h. Compare and contrast your solutions using the graph and the function. What do you notice? Explain your reasoning.