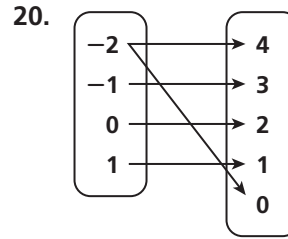
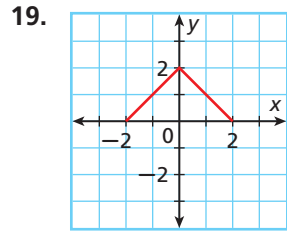
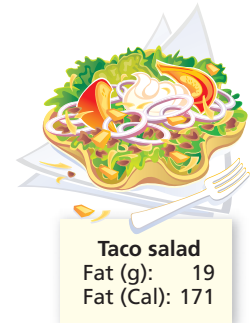
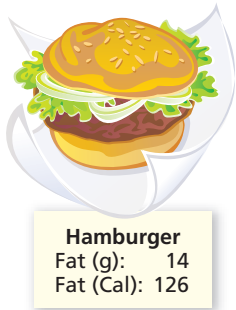


**Multi-Step** Give the domain and range of each relation. Tell whether the relation is a function. Explain.



21. **Consumer Application** An electrician charges a base fee of \$75 plus \$50 for each hour of work. Create a table that shows the amount the electrician charges for 1, 2, 3, and 4 hours of work. Let  $x$  represent the number of hours and  $y$  represent the amount charged for  $x$  hours. Is this relation a function? Explain.
22. **Geometry** Write a relation as a set of ordered pairs in which the  $x$ -value represents the side length of a square and the  $y$ -value represents the area of that square. Use a domain of 2, 4, 6, 9, and 11.
23. **Multi-Step** Create a mapping diagram to display the numbers of days in 1, 2, 3, and 4 weeks. Is this relation a function? Explain.
24. **Nutrition** The illustrations list the number of grams of fat and the number of Calories from fat for selected foods.
- Create a graph for the relation between grams of fat and Calories from fat.
  - Is this relation a function? Explain.



25. **Recreation** A shop rents canoes for a \$7 equipment fee plus \$2 per hour, with a maximum cost of \$15 per day. Express the number of hours  $x$  and the cost  $y$  as a relation in table form, and find the cost to rent a canoe for 1, 2, 3, 4, and 5 hours. Is this relation a function? Explain.
26. **Health** You can burn about 6 Calories per minute bicycling. Let  $x$  represent the number of minutes bicycled, and let  $y$  represent the number of Calories burned.
- Write ordered pairs to show the number of Calories burned by bicycling for 60, 120, 180, 240, or 300 minutes. Graph the ordered pairs.
  - Find the domain and range of the relation.
  - Does this graph represent a function? Explain.
27. **Critical Thinking** For a function, can the number of elements in the range be greater than the number of elements in the domain? Explain.
28. **Critical Thinking** Tell whether each statement is true or false. If false, explain why.
- All relations are functions.
  - All functions are relations.