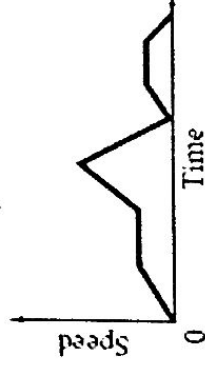


Practice 5-1 and 5-2

The graph shows the speed a student traveled on the way to school.

1. What do the flat parts of the graph represent?
2. Circle the sections of the graph that show the speed decreasing.

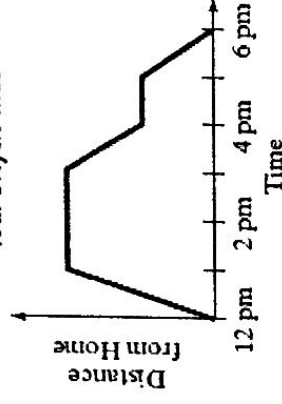
Trip to School



The graph shows the relationship between time and distance from home.

3. What do the flat parts of the graph represent?
4. What do the sections from 3 P.M. to 4 P.M. and from 5 P.M. to 6 P.M. represent?
5. What does the section from 12 P.M. to 1 P.M. represent?

Your Bicycle Ride

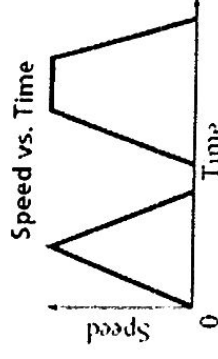


Sketch a graph to describe the following. Explain the activity in each section of the graph.

6. your speed as you travel from home to school
7. the speed of a person driving to the store and having to stop at two stoplights

The graph shows the relationship between time and speed for an airplane.

8. Circle the sections of the graph that show the speed increasing.
9. Circle the section of the graph that shows the plane not moving.
10. Circle the section of the graph that shows the plane moving at a constant speed.



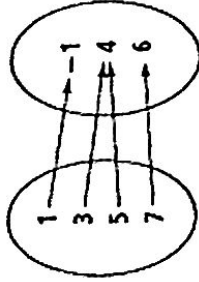
Find the domain and range of each relation.

11. $\{(-3, -7), (-1, -3), (0, -1), (2, 3), (4, 7)\}$ 12. $\{(-5, -4), (-4, 2), (0, 2), (1, 3), (2, 4)\}$

Determine whether each of the following relations is a function.

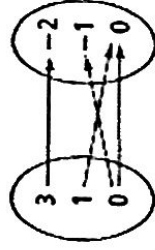
13. $\left\{(-4, -3), (-2, -2), (0, -1), \left(1, -\frac{1}{2}\right)\right\}$

15.

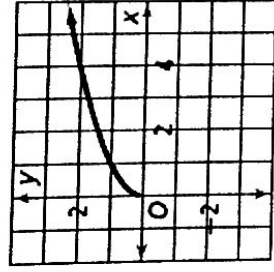


14. $\{(0, 0), (1, 1), (4, 2), (1, -1)\}$

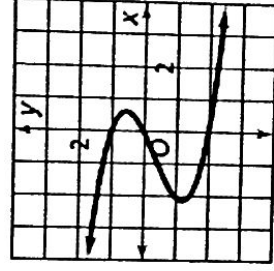
16.



17.



18.



Evaluate each function rule for $x = 3$.

19. $f(x) = 2x - 15$

21. $g(x) = \frac{2}{3}x - 1$

23. $h(x) = -0.1x + 2.1$

20. $f(x) = -x + 3$

22. $h(x) = -\frac{1}{2}x - \frac{1}{2}$

24. $g(x) = \frac{x}{6} + \frac{3}{2}$

Evaluate each function rule for $x = -\frac{1}{2}$.

25. $f(x) = 4x - 2$

27. $g(x) = -|x| + 3$

26. $f(x) = -\frac{1}{2}x + 1$

28. $h(x) = x - \frac{1}{2}$

Find the range of each function for the given domain.

29. $f(x) = -3x + 1; \{-2, -1, 0\}$

31. $h(x) = -x^2; \{-3, -1, 1\}$

30. $f(x) = x^2 + x - 2; \{-2, 0, 1\}$

32. $g(x) = -\frac{1}{2}|x| + 1; \{-2, -1, 1\}$

33. For a car traveling at a constant rate of 60 mi/h, the distance traveled is a function of the time traveled.
- Express this relation as a function.

- Find the range of the function when the domain is $\{1, 5, 10\}$.

- What do the domain and range represent?