

Section 2.7 – Sets, Relations and Functions

Problem Set 3

Take the given relation and rewrite it using the given method. Specify whether the relation is also a function.

27. $f(x) = 5x + 3$ for $x = 0, 5, 8$ as a list.

28. $(4/5, 7), (8, -3), (9, 3), (8, -5)$ as a table.

29. The following table as a diagram

X	y or $f(x)$
1	6
-3	3
6	3
-2	2

30. $y = 3x \cdot x + 3$ for $x = -6, -3, 0, 1, 4$ as a diagram.

31. $f(x) = -x + 2$ for $x = -2, 6, 9$ as a table.

Given each function, find the specified values.

32. If $f: x \rightarrow x + 7$ what is $f(9)$?

33. If $f: x \rightarrow x / 4 - 6$ what are $f(1)$ and $f(-5)$?

34. If $g: x \rightarrow x \cdot x + 2$ what are $g(4)$ and $g(-4)$?

35. If $h(x) = x + 3 / x$ what are $h(-3)$ and $h(2)$?

36. If $h(x) = (x + 4) / x$ what are $h(-3)$ and $h(4)$?

Given each function and its domain, find the function's range.

37. $f: x \rightarrow x + 6, D = \{ 2, 3, 9, 7 \}$

38. $f: x \rightarrow (x - 5) / x, D = \{ -4, 4, 6 \}$

39. $g: x \rightarrow (x \cdot x - x) / 6, D = \{ -4, 7, 15 \}$