

Section 2.7 – Sets, Relations and Functions

Problem Set 2

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

14. $f(x) = 2x - 4$ for $x = 0, 2, 5$ as a list.

15. $(1/2, 4), (5, 1), (-3, 4), (5, -2)$ as a table.

16. The following table as a diagram

x	y or $f(x)$
1	5
-3	4
-2	1
-1	1

17. $y = x \cdot x + 7$ for $x = -4, -1, 1, 2, 3$ as a diagram.

18. $f(x) = -x$ for $x = -1, 2, 5$ as a table.

Given each function, find the specified values.

19. If $f: x \rightarrow x + 3$ what is $f(7)$?

20. If $f: x \rightarrow x / 1 - 4$ what are $f(0)$ and $f(-2)$?

21. If $g: x \rightarrow x \cdot x + 2$ what are $g(-4)$ and $g(-1)$?

22. If $h(x) = x + 1 / (3x)$ what are $h(-2)$ and $h(0)$?

23. If $h(x) = (x - 1) / x$ what are $h(-1)$ and $h(1)$?

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

24. $f: x \rightarrow 3x + 8, D = \{ 1, 5, 6, 7 \}$

25. $f: x \rightarrow (x + 2) / (2x), D = \{ -1, 0, 2 \}$

26. $g: x \rightarrow (x \cdot x - x) / 3, D = \{ -2, 5, 11 \}$