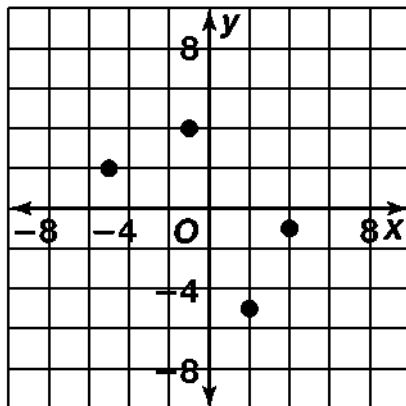
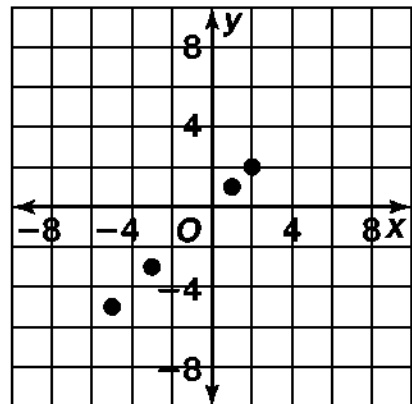


1. Yes; there is one range value for each domain value.
2. No; there are two range values for the domain values -4 and 3.
3. No; there are two range values for the domain value 6.
4. No; there are three range values for the domain value 3.
5. Yes; there is one range value for each domain value.
- 6-10. Answers may vary. Samples are given.
6. No; each distance (domain value) may take you different lengths of times (range values).
7. No; subscribers of a specific age (domain value) may pay different subscription prices (range values).
8. Yes; for each length of cloth (domain value), there is one price (range value).
9. No; each bus (domain value) may contain different numbers of students (range values).
10. Yes; for each number of students (domain value), there

11. A function; no vertical line passes through two graphed points.

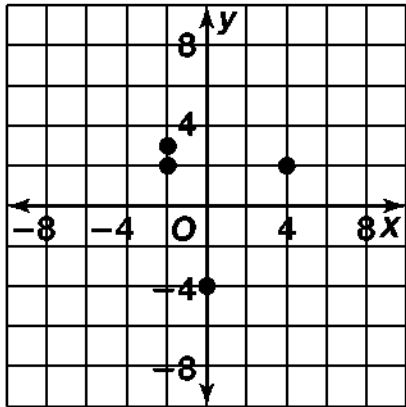


12. A function; no vertical line passes through two graphed points.

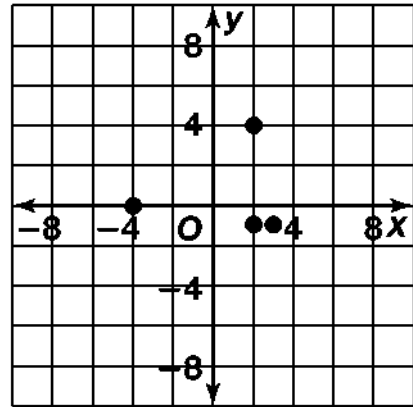


is a desired number of buses (range value).

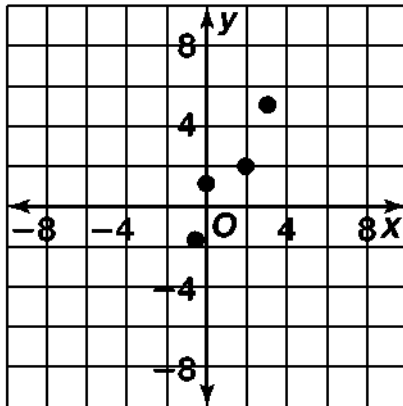
13. Not a function; a vertical line passes through both $(-1, 3)$ and $(-1, 2)$.



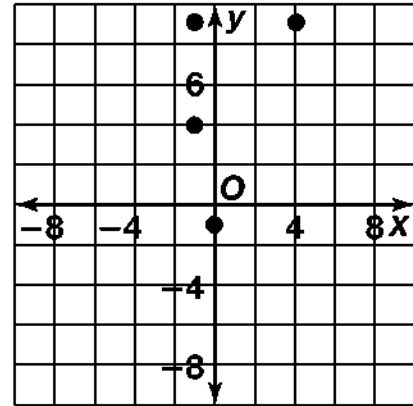
14. Not a function; a vertical line passes through both $(2, -1)$ and $(2, 4)$.



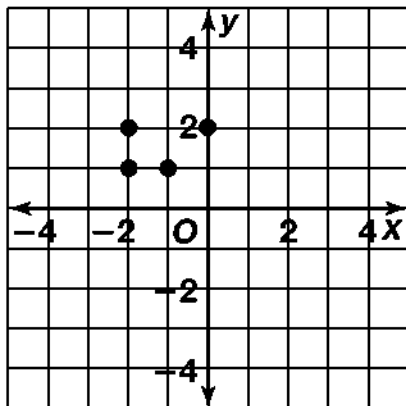
15. A function; there is only one range value for each domain value.



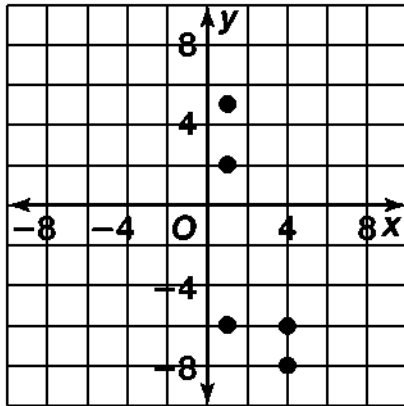
16. Not a function; domain value -1 has two range values 4 and 9 .



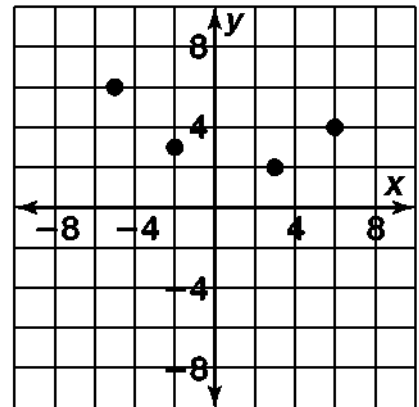
17. Not a function; domain value -2 has two range values 2 and 3 .



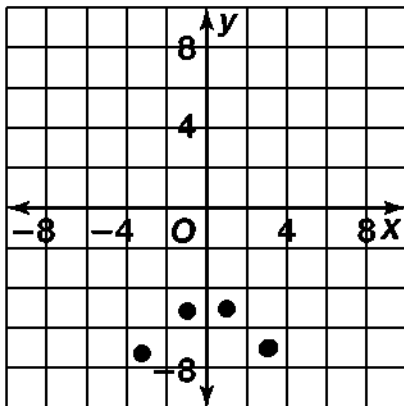
18. Not a function; domain value of 4 has two range values -8 and 6 ; domain value 1 has range values of 2, 5, and -6 .



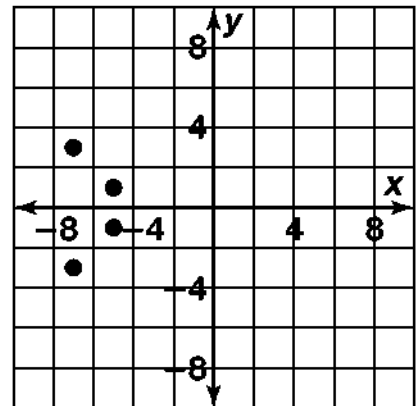
19. A function; no vertical line passes through two points on the graph.



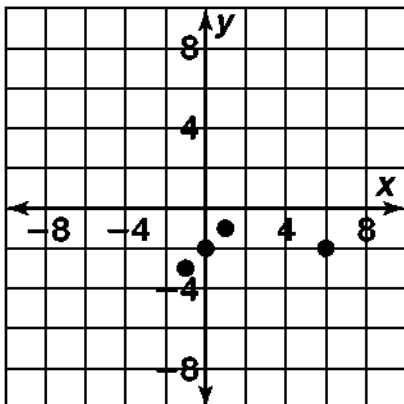
20. A function; no vertical line passes through two points on the graph.



21. Not a function; a vertical line passes through both $(-7, 3)$ and $(-7, -3)$ and through both $(-5, 1)$ and $(-5, -1)$.



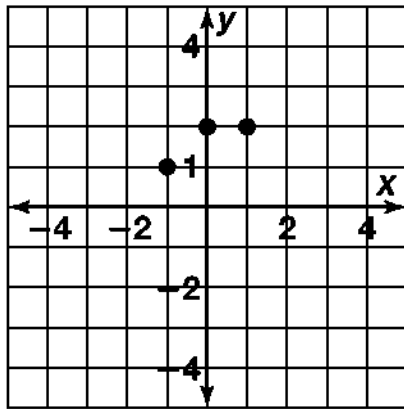
22. A function; no vertical line passes through two points on the graph.



23. No; yes; a relation can have more than one range value for a domain value and thereby not be a function. A function is a relation by definition.
24. For each side length, there is one and only one area of the square.
25. A function can have the same y -coordinate with different x -coordinates, but it cannot have the same x -coordinate with different y -coordinates.
26. Each range value is two greater than its domain value.
27. Each range value is the absolute value of its domain value.
28. Each range value is 0.5 times its domain value.
29. Each range value is the square of its domain value.

30. a. Answers may vary. Sample:
 $\{(-1, 1), (0, 2), (1, 2)\}$,
 $\{(-1, 1), (0, 1), (0, 2), (1, 1)\}$

- b. For samples in 30a: Function; no vertical line passes through two graphed points.



Not a function; a vertical line passes through both $(0, 1)$ and $(0, 2)$.

