

I. Solve each equation.

1) $\frac{x}{12} = -2$

II. Solve each equation.

2) $1 + 6k + 7k = 1$

III. Solve each equation.

3) $2n + 2 = 11 - 7n$

IV. Solve each equation.

4) $2(1 - r) = 4r - 22$

V. Solve each equation.

5) $7 = 5x - 5x$

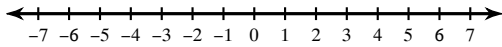
VI. Solve each equation.

6) $\left| \frac{k}{2} \right| + 3 = 4$

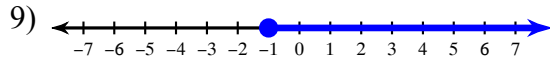
7) $|k - 1| + 7 = 9$

VIII. Draw a graph for each inequality.

8) $x < -2$



IX. Write an inequality for each graph.



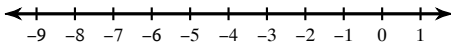
X. Write an equation or inequality for each.

10) Five more than a number squared is 14.

11) 8 is less than the quotient of x and 11.

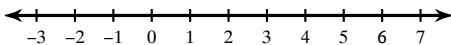
XI. Solve each inequality and graph its solution.

12) $-84 \leq 14n$



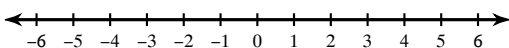
XII. Solve each inequality and graph its solution.

13) $v - 3v \leq -8$

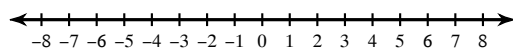


Solve each compound inequality and graph its solution.

14) $-8 < 3n + 1 < 7$



15) $2x + 8 \leq 2$ or $6x + 4 > 28$

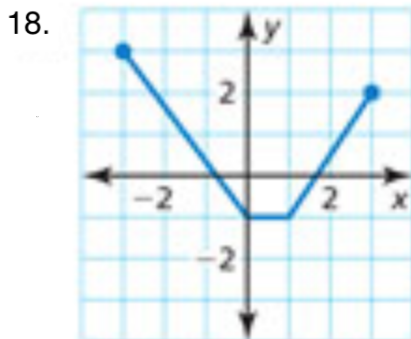
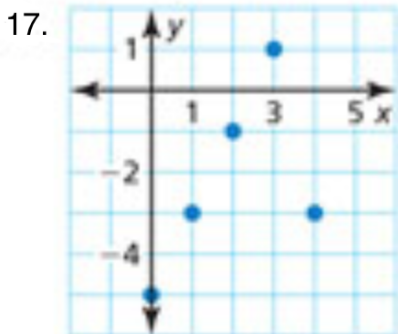


Determine whether the relation is a function. Explain. (Section 3.1)

16.

| | | | | | |
|-------------|----|---|---|---|---|
| Input, x | -1 | 0 | 1 | 2 | 3 |
| Output, y | 0 | 1 | 4 | 4 | 8 |

Find the domain and range of the function represented by the graph. (Section 3.1)



Determine whether the graph, table, or equation represents a *linear* or *nonlinear* function. Explain. (Section 3.2)

19.

| x | y |
|-----|-----|
| -5 | 3 |
| 0 | 7 |
| 5 | 10 |

Determine whether the domain is *discrete* or *continuous*. Explain. (Section 3.2)

20.

| | | | |
|---------------------|----|----|----|
| Depth (feet), x | 33 | 66 | 99 |
| Pressure (ATM), y | 2 | 3 | 4 |