

1. Determine whether the given value of x is a solution of the given inequality.

$$x > 8; x = 8$$

2. Determine whether the given value of x is a solution of the given inequality.

$$3x \leq -10; x = -4$$

3. Solve the following inequality.

$$\frac{x}{-9} > 2$$

4. Solve the following inequality.

$$6x \geq -84$$

5. Solve the following inequality.

$$\frac{2}{3}x - \frac{1}{5}x < 7$$

6. Solve the following inequality.

$$\frac{4}{3}x \geq \frac{16}{15}$$

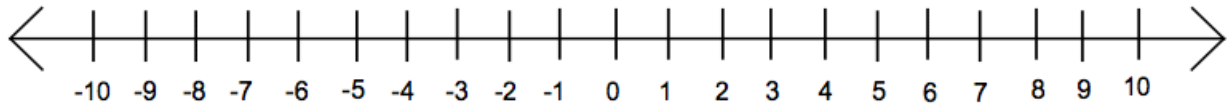
7. Solve the following inequality.

$$x - 11 > -1$$

8. Solve and graph the inequality $17 - 3x < 26$

a. Solve:

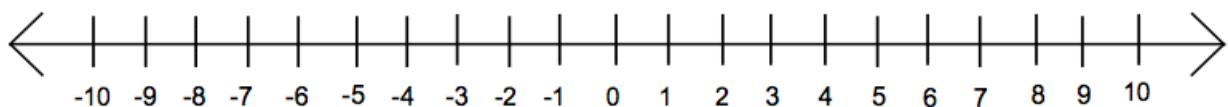
b. Graph:



9. Solve and graph the inequality $3 - 7x \geq 28 - 2x$

a. Solve:

b. Graph:



10. Solve the following inequality.

$$2(x + 3) \geq 19 - 3(5 - 2x)$$

11. Solve the following inequality.

$$9x - 2 < 4x + 8$$

12. The price of a pizza is \$11.

a. Find the price for x pizzas.

b. If Steve has \$180 to spend on pizzas for his party, write and solve an inequality which determines the most number of pizzas he can buy.

13. Mrs. Harris has 6 ten dollar bills and x twenty dollar bills. If the total value of the money is less than \$150, how many twenty dollar bills could she have?

14. A turkey club contains 70 g of carbohydrates. Suppose the recommended daily carbohydrate intake is 340 g. How many complete turkey club's would Danielle have to eat in order to consume enough carbohydrates to meet the recommendation?

15. Fill in the blank with an inequality sign to make each of the following statements true.

a. If $y > z$ and $x < y$ then x _____ z

b. If $a < b$ then $6a - 1$ _____ $6b - 1$

c. If $m > n$ then $-7m$ _____ $-7n$

d. If $x > y$ then $\frac{x}{5}$ _____ $\frac{y}{5}$

ANSWER KEY

1. No
2. Yes
3. $x < -18$
4. $x \geq -14$
5. $x < 15$
6. $x \geq \frac{4}{5}$
7. $x > 10$
8. .
 - a. $x > -3$
 - b. Open dot at -3, arrow to right.
9. .
 - a. $x \leq -5$
 - b. Closed dot at -5, arrow to left.
10. $x < \frac{1}{2}$
11. $x < 2$
12. .
 - a. $11x$
 - b. At most 16.
13. 0, 1, 2, 3, or 4
14. At minimum would be 5.
15. .
 - a. No solution
 - b. $<$
 - c. $<$
 - d. $>$