

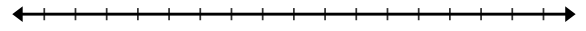
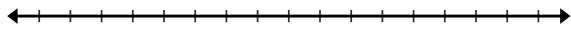


### ABSOLUTE VALUE INEQUALITIES WORKSHEET

**Solve and then graph the following inequalities:**

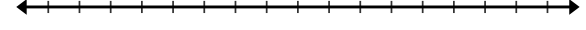
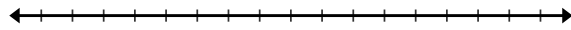
1.  $|2x - 5| + 2 \leq 13$

2.  $|6 - 3x| < 15$



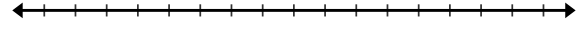
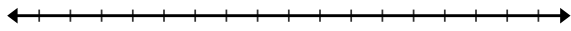
3.  $|5 - x| + 4 \leq 9$

4.  $|11 - 2x| - 6 > 11$



5.  $|7 - x| + 2 \geq 12$

6.  $9 - |x + 4| < 5$



7. Which of the following is the inequality of the graph below?



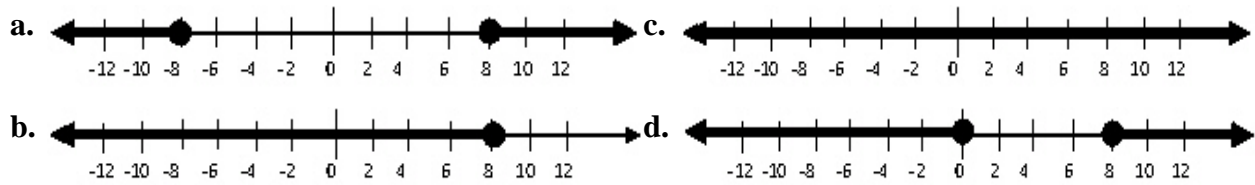
a.  $|3 - 2x| \geq 3$

c.  $|3 - 2x| \leq 3$

b.  $|3 - 2x| > 3$

d.  $|3 - 2x| < 3$

8. Which of the following is the solution of  $|\frac{3}{4}x - 3| - 8 \geq -5$  ?



9) The weight of a 40 lb bag of fertilizer varies as much as 4 oz from the stated weight. Write an absolute value inequality and a compound inequality for the weight,  $w$ , of a bag of fertilizer.

10) Write an absolute value inequality and a compound inequality for the temperature,  $t$ , that was recorded to be as low as  $65^\circ\text{F}$  and as high as  $87^\circ\text{F}$  on a certain day.

11) The duration of a telephone call to a software company's help desk is at least 2.5 minutes and at most 25 minutes. Write an absolute value inequality and a compound inequality for the duration,  $d$ , of a telephone call.

12) The circumference,  $c$ , of basketball for woman must be between 28.5 and 29 inches. Write an absolute value inequality and a compound inequality for the circumference.