

Solving Inequalities Self-Test  
SOL'S covered: A.5abc

Name \_\_\_\_\_

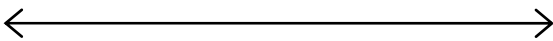
- 1) Solve:  $x + 3 < 12$   
a)  $x > -15$     b)  $x < 15$     c)  $x < 9$     d)  $x > -9$     e) none of these
- 2) Translate the word sentence into an inequality: "A number is greater than 5."  
a)  $x - 5$     b)  $x + 5$     c)  $x > 5$     d)  $x < 5$     e) none of these
- 3) Solve:  $\frac{1}{2}x > 2$   
a)  $x > -2$     b)  $x < -2$     c)  $x > 4$     d)  $x < -4$     e) none of these
- 4) Solve:  $\frac{-x}{4} > 8$   
a)  $x > -2$     b)  $x < -2$     c)  $x > -32$     d)  $x < -32$     e) none of these
- 5) Solve:  $2x + 2 > 4$   
a)  $x > 4$     b)  $x < 4$     c)  $x > 1$     d)  $x < 1$     e) none of these

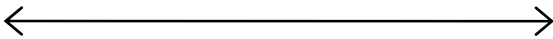
**Solve each of the following. SHOW ALL OF YOUR WORK!!!**

- 6)  $n + 5 \geq 32$                       7)  $-81 > 16 + q$                       8)  $12x < -144$
- 9)  $-13d < -65$                       10)  $\frac{a}{-10} \leq -2$                       11)  $\frac{-3}{5}f > \frac{-4}{15}$
- 12)  $3r - 5 \leq 7$                       13)  $\frac{r}{8} - 5 \leq -12$                       14)  $3(5x + 2) - 7x < 38$


Graph the solutions. Rewrite the inequalities if necessary.

15)  $x > 0$  or  $x < 3$  

16)  $x \geq -2$  or  $x \leq -3$  

17)  $3w < 6$  and  $-2w < 10$  

18)  $-8 \leq 2z - 4 < 4$  

- 19) What is the value of  $x$  so that the perimeter of the rectangle shown is at least 92 centimeters? 

20) Ms. Salgado needs to have her car repaired but does not want to spend more than \$225 for the repairs. The mechanic says that the part needed for the repair will cost \$78, and that labor will cost an additional \$35 per hour. Which inequality below represents the greatest number of hours the mechanic can work without exceeding Ms. Salgado's budget?

- a)  $225 - 35x < 78$       b)  $113x \leq 225$       c)  $35 + 78x \leq 225$       d)  $35x + 78 \leq 225$