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

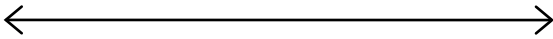1) Solve: $x + 3 < 12$
    a) $x > -15$ b) $x < 15$ c) $x < 9$ d) $x > -9$ e) none of these

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: $2x + 2 > 4$
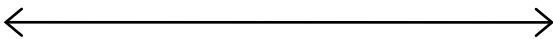   a) $x > 4$ b) $x < 4$ c) $x > 1$ d) $x < 1$ e) none of these

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) $\frac{-3}{5}f > \frac{-4}{15}$

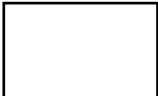12) $3r - 5 \leq 7$ 13) $\frac{r}{8} - 5 \leq -12$ 14) $3(5x + 2) - 7x < 38$

Graph the solutions. Rewrite the inequalities if necessary.
15) $x > 0$ or $x < 3$ $\longleftrightarrow$

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

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

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

                                                                    3x cm
19) What is the value of x so that the perimeter of the rectangle shown is at least 92
centimeters?   (4+x) cm

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) $35x + 78 \leq 225$