Name _____ Date _____

Lesson 3.6 Extra Practice

Write the word sentence as an inequality.

1. A number x is at most 3. $x \leq 3$
2. A number y added to 2 is greater than 7. $y + 2 > 7$
3. A number c multiplied by 3 is less than −12. $3c < -12$
4. A number m minus 1.5 is no less than 2. $m - 1.5 \geq 2$
5. Your friend writes the word sentence as an inequality. Is your friend correct? Explain your reasoning.

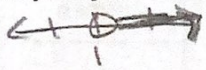
> Three times a number z is more than 18.
> $3z < 18$

no more than is $>$ 18

Tell whether the given value is a solution of the inequality.

6. $t - 3 \geq 2; t = 10$ $10 - 3 \geq 2$ $7 \geq 2$ yes
7. $6w < -2; w = 1$ $6(1) < -2$ $6 < -2$ no
8. $p + 1.6 \leq 4; p = 5$ $5 + 1.6 \leq 4$ $6.6 \leq 4$ no
9. $\frac{1}{2}d > -3; d = 0$ $\frac{1}{2}(0) > -3$ $0 > -3$ yes

Graph the inequality on a number line.

10. $k > 1$ 
11. $n \leq -2.5$ 

12. In order to try out for one of the parts in a play at the local theater, you must be at most 12 years old. Write an inequality that represents this situation. $y \leq 12$ 

Tell whether the given value is a solution of the inequality.

13. $3h - 7 < h; h = 2$ $3(2) - 7 < 2$ $-1 < 2$ yes
14. $q + 8 \geq \frac{q}{4}; q = -12$ $-12 + 8 \geq \frac{-12}{4}$ $-4 \geq -3$ no
15. Consider the inequalities $-2x < 10$ and $-6 < -2x$.
    a. Is $x = 0$ a solution of both inequalities? $-2(0) < 10$ $0 < 10$ $-6 < -2(0)$ $-6 < 0$ yes
    b. Is $x = 4$ a solution of both inequalities? no $-2(4) < 10$ $-8 < 10$ $-6 < -2(4)$ $-6 < -8$
    c. Find another value of x that is a solution of both inequalities. $x < -5$ $3 < x$
16. The maximum area that is available for a rectangular garden is 80 square feet.
    a. Write an inequality that represents the possible dimensions for the garden.
    b. Find three different sets of allowable dimensions for the garden. Find the area of each garden.