Inequalities – Day 1   Name _____
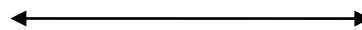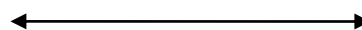Assignment   Date _____ Period _____

Solve and graph the solution for the following problems. Then write what the solution is using a complete sentence.
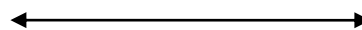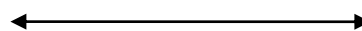
1. $3x - 9 > 18$ $\longleftrightarrow$
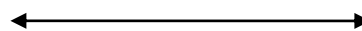
2. $10 \leq 2x - 12$ $\longleftrightarrow$

3. $3t > -9$ $\longleftrightarrow$

4. $5(x - 2) > 20$ $\longleftrightarrow$

5. $4y + 5 \geq y + 26$ $\longleftrightarrow$

6. $6y + 7 \geq 2y + 27$ $\longleftrightarrow$

Use each scenario to write an inequality that can be used to solve the situation, but DO NOT SOLVE IT.

7. R & G Catering specializes in catering wedding receptions. They charge $550 for setting up the buffet and an additional $6.50 per guest. Mr. and Mrs. Henderson want to spend no more than $1200 on their daughter's wedding reception. Write an inequality in terms of the number of guests, g that they can invite to the wedding reception.

8. Anthony is carpeting several rooms in his home. The carpet costs $14.95 per square yard plus $200 for installation. He can afford to spend no more than $3000. Write an inequality to represent how many square yards of carpet Anthony can afford.

The Gonzalez family is going on a vacation to South Padre Island. They start with $1500 in traveler's checks and plan to spend $180 per day.

1.   Write an expression describing the relationship between the number of days on vacation and the amount of money that remains.

2.   If they stay at least 5 days, how much money could they expect to have left?

3.   If they have at most $1140 remaining, how many days have they been on vacation?

4.   They want to stay at least 10 days, do they have enough money?

5.   If they want to come home with at least $600 left, what number of days could they stay?

Mendez & Co. specializes in catering wedding receptions. They charge $550 for providing food for the buffet and additional $6.50 per guest.

6.   Write an expression for the number of guests that could be invited to a wedding reception.

7.   If the reception costs more than $2500 how many guests attended the reception?

8.   If there were no less than 100 guests, how much would the reception cost?

9.   If you want to spend at most $3800, how may guests could you invite?

10.   If your budget for the wedding reception is $2500, and you want to invite 350 guests, do you have enough money? Explain.