Algebra 1 Block	Name	
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Inequalities Word Problem Worksheet	Date	Period

Establish a variable, write an inequality to represent the scenerio, and solve. Write a complete sentence to describe your solution.

1) Keith has \$500 in a savings account at the beginning of the summer. He wants to have at least \$200 at the end of the summer. He withdraws \$25 per week for food, clothing, and movie tickets. How many weeks can Keith withdraw money from his account?

2) A taxi charges a flat rate of \$1.75, plus an additional \$0.65 per mile. If Erica has at most \$10 to spend on the cab ride, how far could she travel?

3) Chris wants to order DVD's over the internet. Each DVD costs \$15.99 and shipping the entire order costs \$9.99. If he can spend no more than \$100, how many DVD's could he buy?

4) Allison practices her violin for at least 12 hours per week. She practices for three fourths of an hour each session. If Allison has already practiced 3 hours this week, how many more sessions remain for her to meet or exceed her weekly practice goal?

5) Pet Supplies makes a profit of \$5.50 per bag on its line of natural dog food. If the store wants to make a profit of no less than \$5225, how many bags of dog food does it need to sell?

6) Ryan is a wrestler trying to make weight. He currently weighs 200 lbs. If he cuts 2 lbs. per week, how many weeks will it take him to weigh less than 175 lbs.?

7) Tom is deciding whether or not he should become a member gym to use their basketball courts. The membership cost is \$135. Members pay \$2 to rent out the basketball courts. Non-members can rent the court also, but they have to pay \$11 each time. how many times would Tom need to rent the court in order for it be cheaper to be a member than a non member?

Solve each inequality and graph its solution.

$$10) -4(4+7x) + x \ge -6x + 5$$

$$11) -7(4-x) + 4 \ge -18 + 7x$$

$$-10 -8 -6 -4 -2 0$$

Represent each of the following as an algebraic inequality.

- 12) x is at most 30_______13) the sum of 5x and 2x is at least 14_______14) the product of x and y is less than or equal to 4_______15) 5 less than a number y is under 20_______
- 16) If 5 times a number is increased by 4, the result is at least 19. Find the least possible number that satisfies these conditions.
- 17) The sum of twice a number and 5 is at most 15. What are the possible values for the number?
- 18) Three times a number increased by 8 is no more than the number decreased by 4. Find the number.
- 19) Two-thirds of a number plus 5 is greater than 12. Find the number.
- 20) The sum of a number and 81 is greater than the product of -3 and that number. What are the possible values for the number?