

Directions: Solve each inequality. Express the solution graphically and in set notation.

1)  $7x + 6 \leq -134$



2)  $-2(-6 + x) < 32$



3)  $-5.7(-9.1 + n) > 47.88$



4)  $0 > 8a + 3a$



5)  $-5(r - 2) \geq 7r - 38$



6)  $4(1 + x) > -x + 29$



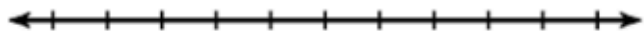
7)  $-3(g - 3) > -42$



8)  $7 \leq 7 + \frac{x}{9}$



9)  $13 \leq 3n + 4 + 6n$



10)  $m + 4.4 + 8 > 15.4$



11)  $4(4 + 2x) + 5x \leq 40 + 5x$



12)  $-2w - 8 \leq -5(w - 2)$



Write each situation as an inequality then graph it.

14)

Queen Elizabeth has no more than 20 grandchildren.

The Algebros have won less than 3 teacher awards.

15)

Mr. Kelly has more than 7 barbies.

100 is greater than the number of days it will rain this year.

Write the verbal sentence as an inequality. Then solve the inequality.

15) The quotient of  $g$  and  $-8$  is greater than or equal to  $-5$ .

16) The product of negative two and a number is less than 19.

17) **Translate the verbal phrase into an inequality and then solve.**

The sum of  $5x$  and  $2x$  is greater than the difference of  $9x$  and 4.

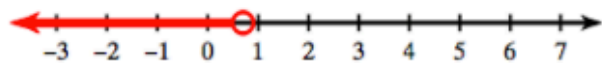
- 18) Keith has \$500 in a savings account at the beginning of the summer. He wants to have at least \$200 at the end of the summer. He withdraws \$25 per week for food, clothing, and movie tickets. How many weeks can Keith withdraw money from his account?
- 19) Allison practices her violin for at least 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?
- 20) 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
- 21) 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?

# CA Solutions

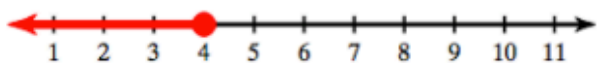
1)  $\{x \text{ real} | x \leq -20\}$



3)  $\{n \text{ real} | n < 0.7\}$



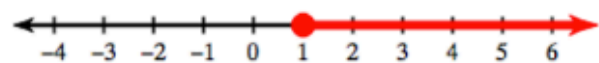
5)  $\{r \text{ real} | r \leq 4\}$



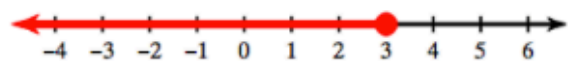
7)  $\{g \text{ real} | g < 17\}$



9)  $\{n \text{ real} | n \geq 1\}$



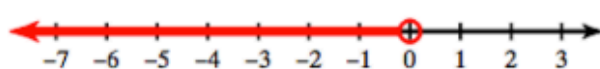
11)  $\{x \text{ real} | x \leq 3\}$



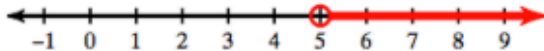
2)  $\{x \text{ real} | x > -10\}$



4)  $\{a \text{ real} | a < 0\}$



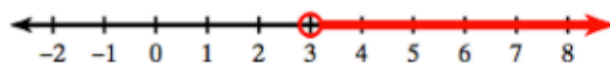
6)  $\{x \text{ real} | x > 5\}$



8)  $\{x \text{ real} | x \geq 0\}$



10)  $\{m \text{ real} | m > 3\}$



12)  $\{w \text{ real} | w \leq 6\}$

