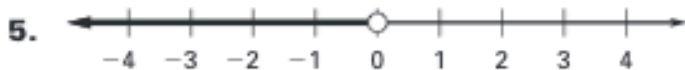


Algebra I

Review 5.1-5.3

Name _____

Write an inequality that is represented by the graph.



Solve the inequality. Graph your solution.

7. $x + 7 > 1$



8. $n - 3 \leq 9$



9. $10 \geq a + 7$



10. $m - 3 < -2$



11. $p - 5 > -5$



12. $x + 3 \leq -4.5$



13. $b + 9.5 \leq -6.4$



14. $y + 2.5 < 7.3$



15. $z - 10.2 > 18.3$



16. $d - 8 > 2.2$



Write the verbal sentence as an inequality. Then solve the inequality and graph your solution.

17. The sum of 15 and
- n
- is less than 8.



18. The difference of
- m
- and 3 is greater than or equal to 10.



19. Twenty-four is less than or equal to the sum of 35 and
- x
- .



20. Eighty-five is greater than the difference of
- x
- and 63.



- 21.
- Summer Reading**
- During the summer you want to read at least 32 books. You have read 21 books so far this summer. What are the possible numbers of books you can read to pass your goal?

- 22.
- Baseball Hats**
- You are a big baseball fan. You have a goal of attending a baseball game in every major league stadium in the country. Every time you go to a different stadium, you buy a baseball hat. You keep your hats in a display case that holds 25 hats. You have 8 baseball hats so far. What are the possible numbers of hats you can collect without needing another display case?

LESSON
5.2

Match the verbal sentence with the inequality. Then solve the inequality.

- | | |
|--|--------------------------|
| 1. The product of 3 and x is less than or equal to 18. | A. $\frac{x}{18} \geq 3$ |
| 2. The product of 18 and x is greater than or equal to 3. | B. $18x \geq 3$ |
| 3. The quotient of x and 18 is greater than or equal to 3. | C. $3x \leq 18$ |

Solve the inequality. Graph your solution.

4. $3y \geq 4$



5. $\frac{x}{2} < 6$



6. $\frac{m}{5} > -5$



7. $\frac{c}{-10} \leq -2$



8. $8n > -1$



9. $42 < 6z$



10. $-5p \leq 2$



11. $\frac{w}{-4} < 8$



12. $-7a \geq -3$



13. $52 \leq -13x$



14. $0.25x > 18$



15. $-2d < 3$



Write the verbal sentence as an inequality. Then solve the inequality and graph your solution.

16. The product of 12 and
- y
- is greater than or equal to 60.



17. The product of 7 and
- b
- is less than
- -35
- .



18. The quotient of
- m
- and 2 is greater than 23.



19. The quotient of
- p
- and 4.5 is less than or equal to 10.



- 20. Flower Beds** You are in charge of buying the flowers for the flower beds around your school. You cannot spend over \$80 on flowers. The flowers cost \$10.99 for a flat of flowers. What are the possible numbers of flats of flowers you can buy?
- 21. Pavilion Rental** You and three of your friends decide to rent a pavilion at a local park for an end-of-the-school-year party. The group budget is \$80. The group decides to split the cost equally.
- What are the possible amounts of money that each of you can spend?
 - If two more of your friends decide to pitch in for the party, what are the possible amounts of money that each of you can spend if you all split the cost equally?

Solve the inequality. Graph your solution.

1. $4x - 7 \geq 1$



2. $7p + 3 < -11$



3. $8 - 2n \geq 26$



4. $3(a - 4) \leq 33$



5. $6(y + 1) > 6$



6. $-2(c - 1) < -22$



7. $8m - 7 < 4m + 5$



8. $10 - 11d > -5d - 4$



9. $9z \leq -7z + 14$



10. $6w + 3 < 2w + 15$



Solve the inequality, if possible.

11. $6y - 9 \leq 4y + 2y - 16$

12. $7p - 11p + 3 \geq 3 - 4p$

13. $4(c - 5) < 2(c - 10)$

14. $5(a - 3) \leq 5a - 6$

15. $6(x - 8) > 6x - 48$

16. $2(3d - 4) < 4 + 6d - 15$

17. $4m + 14 - 2m \leq 2(m + 7)$

18. $-2(n - 3) \geq 1 - 2n + 5$

19. $4(3 - 2x) > 2(6 - 4x)$

20. $2(5 - a) > 4a + 13 - 6a$

21. $-4n + 11 < -4(n + 6)$

22. $3(5 - 6x) \leq 2(11 - 9x)$

23. $2m + 10 - 7m \leq 5(4 - m)$

24. $6(1 - 2n) \leq 5 - 12n$

Translate the verbal phrase into an inequality. Then solve the inequality and graph your solution.

25. Six more than 5 times a number x is greater than or equal to 31.



26. Twice the sum of 4 and x is less than -16 .



27. The difference of $10x$ and $3x$ is less than or equal to the sum of $4x$ and 21.



28. The sum of $2x$ and $4x$ is greater than or equal to the sum of $2x$ and 36.



29. The difference of $2x$ and 15 is less than or equal to the sum of $4x$ and 17.



30. **Weaving** A weaver spends \$420 on supplies to make wall hangings and plans to sell the wall hangings for \$80 each.

- Write an inequality that gives the possible numbers w of wall hangings the weaver needs to sell in order for the profit to be positive.
- What are the possible numbers of wall hangings the weaver needs to sell in order for the profit to be positive?

