

Practice Chapter 3 Test

Name _____ Date _____

Write an inequality that represents each word sentence.

1. Arthur set the timer for at least 45 minutes. _____
2. The weight of the box is greater than 54 pounds. _____
3. The number of cars that passed through the intersection is at most 1300. _____
4. The number of windows in the office building is no less than 100. _____

Express each inequality in both set-builder and interval notation.

5. $w < 89$ _____ 6. $k \geq 259$ _____ 7. $m < 0$ _____

Graph each solution set on a number line. Then describe a situation the inequality could represent.

8. $q > 5$ 9. $a \leq -4$ 10. $f \geq 1$
- _____

Solve each inequality. Write the solution set in both set-builder and interval notation. On a separate sheet of paper, graph and check the solution set.

11. $d + 3 < 9 - 12$ 12. $5 \leq 8 + 5r - 4r + 1$ 13. $11c - 7.4 - 10c < -5.6$
- _____

14. $-a - \frac{6}{5} < -3$ 15. $-4 \leq \frac{r}{-3}$ 16. $-\frac{3}{2} \geq -\frac{t}{3} - \frac{t}{3}$
- _____

17. $\frac{3}{5} - \frac{3}{2}n \leq \frac{7}{10}$ 18. $8 - 2.7d < 5.9 - 3.4d$ 19. $-5 < 4z - (6z + 7)$
- _____



Graph each compound inequality. Write the solution set in both set-builder and interval notation.

20. $-2 \leq n \leq 4$

21. $h < -2$ OR $h \geq 1$

22. $v \leq -3$ OR $v > 2$

Solve and check each compound inequality. On a separate sheet of paper, graph the solution set.

23. $1 < x - 4 < 7$

24. $-10 \leq 3b - 1 < 14$

25. $-2x - 3 \geq 1$ OR $2x + 8 > 14$

Solve each inequality. On a separate sheet of paper, graph and check the solution set.

26. $-\frac{3}{4}|c| \geq -3$

27. $|3w + 2| - 1 < 5$

28. $1.4 + |x - 1| \geq 3.7$

Solve. Check your work.

29. Cheng can spend \$35 to make a project. He has already spent \$28. He still needs pipe cleaners that cost \$1.25 per box. What is the greatest number of boxes of pipe cleaners he can buy?

30. Jonas charges \$75 plus \$65 per hour for tractor work. How many hours does he work to earn at least \$335?

Tell About It

Explain how you solve the problem. Show all your work.

31. Solve the inequality $-x + 2 > a$ for x . Then find the least value of a that makes the solution set all negative numbers.
