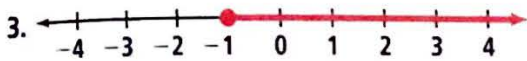


**Do you know HOW?**

Write an inequality that represents each verbal expression or graph.

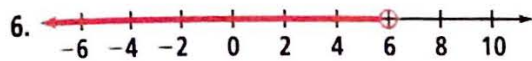
1. all real numbers y greater than or equal to 12

2. 8 more than a number m is less than 5.



4. The product of -3 and t is greater than 11.

5. c less than 7 is less than or equal to -3 .



7. A cat weighs no more than 8 lb.

Solve each inequality. Graph the solutions.

8. $8d + 2 < 5d - 7$

9. $2n + 1 \geq -3$

10. $-2x + 7 \leq 45$

11. $5s - 3 + 1 < 8$

12. $5(3p - 2) > 50$

13. $\frac{y}{2} < -3$

14. $6 \geq -\frac{4}{5}n$

15. $-1.5d > 18$

16. A baseball team wants to collect at least 160 cans of food for an upcoming food drive. Team members brought 42 cans of food on Monday and 65 cans of food on Wednesday. Write and solve an inequality to describe how many cans of food the team must collect on Friday to make or exceed their goal.

17. Suppose you earn \$7.25 per hour working part-time for a florist. Write and solve an inequality to find how many *full* hours you must work to earn at least \$125.

Solve each inequality, if possible. If the inequality has no solution, write *no solution*. If the solutions are all real numbers, write *all real numbers*.

18. $7 - 6b \leq 19$

19. $15f + 9 > 3(5f + 3)$

20. $6z - 15 \geq 4z + 11$

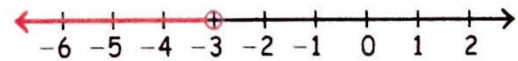
21. $-3(4 - m) \geq 2(4m - 14)$

22. $8z + 5 - 2z \leq 3(2z + 1) + 2$

23. The cheerleaders are making a rectangular banner for a football game. The length of the banner is 30 ft. The cheerleaders can use no more than 96 ft of trim around the outside of the banner. What are the possible widths of the banner?

Do you UNDERSTAND?

- © 24. a. **Error Analysis** A student claims that the graph below represents the solutions of the inequality $-3 < x$. What error did the student make?



- b. What inequality is actually represented by the graph?

Decide whether the two inequalities in each pair are equivalent. Explain.

25. $36 \leq -4 + y$; $40 \leq y$

26. $9 + b > 24$; $b > 33$

27. $m - \frac{1}{2} < \frac{3}{8}$; $m < \frac{7}{8}$

- © 28. **Reasoning** A local gym offers a trial membership for 3 months. It discounts the regular monthly fee x by \$25. If the total cost of the trial membership is less than \$100, you will consider signing up. What inequality can you use to determine whether you should sign up?