Write each compound inequality without using *and*.

1. $b > 0$ and $b < 5$
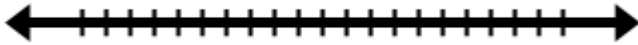
2. $h > -8$ and $h < 8$

3. $y \leq 4$ and $y \geq -1$
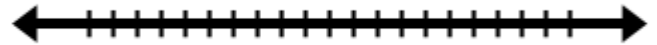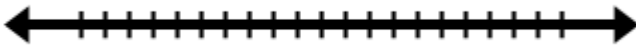
4. $g \geq 2$ and $g \leq 5$

Graph the solution of each compound inequality.

5. $x > 0$ or $x \leq -4$

6. $z \leq 2$ and $z > -2$

7. $k < 7$ and $k > 5$

8. $y \leq 10$ or $y < 6$
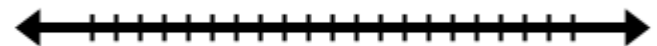
Solve each inequality.

9. $-2 \leq a + 3 < 7$

10. $9 \geq x + 1 \geq 5$

11. $-16 < 8s < 16$

12. $9 \geq 3w > 0$

13. $-6 > r - 2 > -10$

14. $2 \leq h + 5 \leq 8$

15. $-5 < y - 1 < -4$

16. $16 < -4c < 20$

17. $z + 3 > 7$ *or* $z - 5 \leq -12$

18. $v - 8 > 12$ *or* $v + 4 < 20$

19. $p - 5 > -3$ *or* $-2p \leq 2$

20. $c - 2.4 \geq 7.6$ *or* $c - 8.8 \leq 0$

21. $2 > 3y + 2 > -13$

22. $4x - 7 \leq 5$ *or* $-(x - 8) < -1$

23. $2x - 1 > -5$ *or* $-3(x + 1) > 6$

24. $10 \leq 2(k - 6) \leq 14$

25. You go grocery shopping once a week. You love apples, but sometimes buy more than you can eat. You know that you'll eat two in a week, but the most you'll eat is one a day. Write an inequality representing the possible number of apples you could buy for the week.

26. You get free shipping if you spend at least $75 on clothes, but your budget is $150. Write an inequality representing what you could spend to get free shipping.

27. Your personal trainer tells you that you must eat at least 1500 but less than 1800 calories. Write an inequality representing the possible amount of calories you could eat.

28. Several types of bacteria can live in swimming pools. However, bacteria will die if the water is colder than 45 degrees, or warmer than 80 degrees. Rachel's pool doesn't have any bacteria. Write a compound inequality to represent what the temperature of her pool might be.

29. Each type of fish thrives in a specific range of temperatures. The optimum temperatures for sharks range from 18 degrees Celsius to 22 degrees Celsius, inclusive. Write an inequality that represents the temperatures where sharks will thrive.

30. Water freezes to a solid at 32 degrees, and boils to a gas at 212 degrees. Write a compound inequality to show when water is in liquid form. Write another inequality to show when it is NOT in liquid form.

31. Ants can carry between 10 and 50 percent of their bodyweight, inclusive. If an ant weighs 5 mg, write an inequality that represents the amount of weight it can carry.

32. About 20% of the time you sleep is spent in rapid eye movement (REM) sleep, which is associated with dreaming. If an adult sleeps 7 to 8 hours, how much time is spent in REM sleep?

33. Depending on where I go, a trip to the movies for a family of four will cost at least $40 and at most $60. Write an inequality that shows how much each ticket will cost.

34. A store is offering a $30 mail in rebate on all color printers. Luis is looking at different color printers that range in price from $175 to $260. How much can he expect to spend after the rebate?

35. A car gets 27 mpg in the city and 34 mpg on the highway.
    a. Write an inequality to describe how many miles the car will run per gallon.

    b. The car's gas tank holds 12 gallons. How many miles can the car travel with a full tank of gas?

36. Cara is making a beaded necklace for a gift. She wants to spend between $20 and $30 on the necklace. The bead store charges $2.50 for large beads and $1.25 for small beads.

    a. Write and a compound inequality to describe the situation.

    b. If she buys 3 large beads, how many small beads can she buy to stay within her budget. Your answer should be a compound inequality

37. Cindy has scores of 72, 82, 83, and 89 on her biology tests. Use a compound inequality to find the range of scores she can make on her final exam to receive at least a C test average. A C is between 70-80.