2.2 pg 65 Homework Answers listed

1. Subtraction Property of Inequality

2. *Sample answer:* In both cases the same number is added to each side to obtain an equivalent mathematical sentence.

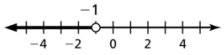
3. subtract 11

4. add 2

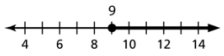
5. add 9

6. subtract 17

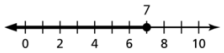
7. $x < -1$



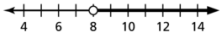
8. $s \geq 9$



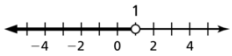
9. $m \leq 7$



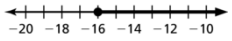
10. $c > 8$



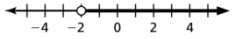
11. $r < 1$



12. $y \geq -16$

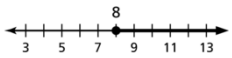


13. $w > -2$

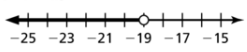


14. $q \leq 12$

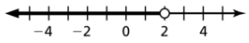
15. $h \geq 8$



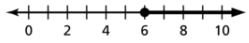
16. $t < -19$



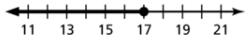
17. $j < 2$



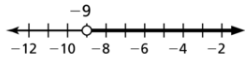
18. $y \geq 6$



19. $p \leq 17$



20. $z > -9$



21. $n + 8 > 11$; $n > 3$

22. $n - 3 \geq -5$; $n \geq -2$

23. $n - 9 < 4$; $n < 13$

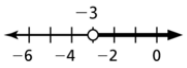
24. $6 \leq n + 15$; $n \geq -9$

25. **a.** $38 + w \leq 50$; $w \leq 12$

b. no; The total being added is 14 pounds, which is not a solution of the inequality found in part (a).

26. $19.76 + x \geq 25$; $x \geq 5.24$

27. The graph is going in the wrong direction.



28. In the second step, 10 needs to be added to each side; $-10 + 10 + x \geq -9 + 10$; $x \geq 1$

29. 33 or more goals

30. **a.** score greater than 117.4 points

b. they both are; Both scores are greater than 117.4 points.

31. A; Subtract 3 from each side; D; order of inequality reverses for opposites

32. $14.2 + 15.5 + x < 51.3$; $x < 21.6$

33. $6.4 + 4.9 + 4.1 + x \leq 18.7$; $x \leq 3.3$

34. *Sample answer:* $x + 34 \leq 50$; A shelf can safely support 50 pounds. The combined weight of items on the shelf is 34 pounds. x represents the possible weights of items that can be put on the shelf safely.

35. no; *Sample answer:* 3, 7, 8, 9, and 12; There are infinitely many solutions. Check 8 and a few numbers greater than and less than 8.

36. **a.** no; It is also possible that the number of students with brown eyes is greater than the number of students with brown hair.

b. no; It is also possible that the number of students with brown eyes is greater than 10 more than the number of students with brown hair.

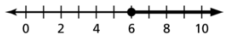
c. yes; All students with both characteristics must have brown hair.

d. yes; If H is greater than or equal to a number, then $H + 10$ must also be greater than or equal to the number.

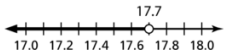
e. no; If all students with brown eyes also have brown hair, then the values would be equal.

f. yes; If H is greater than or equal to a number, then $H + 10$ must be greater than the number.

37. **a.** $x \geq 6$



b. $x < 17.7$



38. $b < a < d < c$

39. -63

40. 132

41. 9

42. -4

43. $x = 4$

44. $y = 6$

45. $s = -104$

46. $n = -29.2$