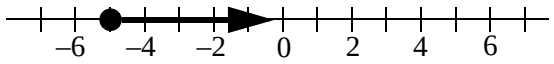
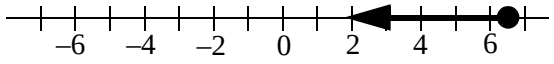
Chapter 4 Review

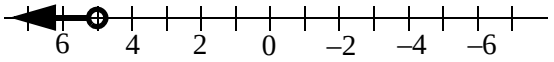
Place the correct sign > or < on the line between the values. (4.1)

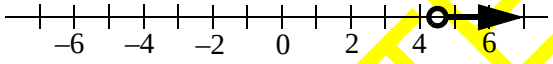
1. 9.9 __ 10
2. 0.6 __ –0.52
3. 0.081 __ 0.81
4. –101 __ –102
5. 5.152 __ 5.125
6. 2.7 __ –7.2
7. 0.9 __ 0.92
8. –8.8 __ 8.7
9. –7.5 __ –5.7
10. $\frac{3}{7}$ __ $\frac{4}{8}$
11. 0.22 __ 0.02
12. 1.3 __ 1.2
13. 9.10 __ 9.01
14. $\frac{8}{9}$ __ $\frac{7}{8}$
15. 6.6 __ 66

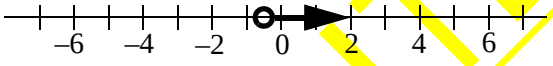
Write the inequality plotted in the line graphs. (4.1)

16. 

17. 

18. 

19. 

20. 

21. 

On a separate piece of paper, draw a number line and plot the inequalities. (4.1)

22. $x > -21$
23. $y < 4$
24. $a \geq 6$
25. $b \leq -6$
26. $a \geq 12$
27. $y < 0$
28. $x > -22$
29. $b \leq -1$
30. $x > -7$
31. $a \geq 7$
32. $y < 11$
33. $x > -1$
34. $y < -2.6$
35. $b \leq 0$
36. $x > -3.5$
37. $y < 3.5$
38. $a \geq 2.2$
39. $x > 5.5$

Solve. (4.1)

40. $2x - 8 > 13$
41. $7 + 4.8y < 19$
42. $-3y + 44 \geq -15$
43. $26 \leq 13c - 6.5$
44. $-7 - x > -10$
45. $3.5x - 6 < 1.5x + 9$
46. $20 + 10v > -14 + 4v$
47. $\frac{x}{4} + 16 \leq 5$
48. $2x - 17 \geq 15$
49. $35 + 5y > 20$
50. $-3y + 12 < -4.5$
51. $21 \leq 4c - 11$
52. $-12 - 2x \geq -20$
53. $7x - 12 > 3x + 18$
54. $12 + 5k \leq -9 + 2k$
55. $14 + \frac{a}{3} \geq 4$

Write the sentence as an inequality. (4.1)

56. 12 is more than an amount *y*.
57. One-third an amount is less than 16.
58. 7.2 is less than or equal to the amount *a*.
59. An amount greater than or equal to –5.
60. An amount that is at least 32.
61. 15 more than a number is greater than 0.
62. 33 less than an amount *a*.
63. One sixth of an amount is less than or equal to –10.
64. 0.9 is less than an amount *n*.
65. An amount more than –6.
66. An amount more than or equal to 17.

Solve. (4.1)

67. Sara's average after 9 tests is 88. What is the lowest score she must achieve in the tenth test to reach an average of at least 89 points?
68. The sum of three consecutive even integers is less than 67. What are the largest values of the three numbers?
69. The perimeter of a rectangle is at least 144 feet. If the length is three times the width, find the smallest integers that could be used to form a rectangle.

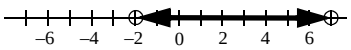
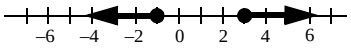
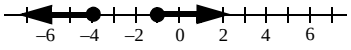
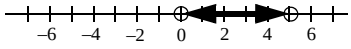
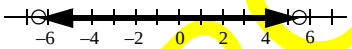
Solve. (4.2)

1. $|x| - 12 = 7$
2. $|y| + 10 = 13$
3. $|a + 5| = 14$
4. $23 = 8 + |s|$
5. $9 + |x| = 17$
6. $11 = |b| + 6$
7. $|x - 22| = -14$
8. $|y| + 21 = 3$
9. $|2a| + 7 = 33$
10. $18 = 44 + |s|$
11. $|7 + x| = 19$
12. $15 = -|b + 4|$
13. $|x| - 8 = 34$
14. $|y + 13| = 43$
15. $16 = |3a + 4|$
16. $-9 = |12 + s|$
17. $|31 + x| + 6 = 3$
18. $35 = |b + 9|$
19. $14 = -|b + 8|$
20. $|x| - 15 = 38$
21. $|y + 12| = 44$

Solve and graph. (4.2)

22. $|x| - 7 > 32$
23. $|y| + 4 \geq 6$
24. $|6a + 36| < 25$
25. $4 \leq 1 + |s|$
26. $12 + |x| > 29$
27. $3 < |b + 6|$
28. $|x - 21| \geq 5$
29. $|y + 7| \leq 3$
30. $|a| + 33 > 1$
31. $4 < |7 + s|$
32. $|9 + x| \geq 24$
33. $2 \leq |b + 9|$
34. $|x| - 16 > 7$
35. $|y + 3| < 1$
36. $15 \geq |5a + 2|$
37. $7 \leq |3 + s|$
38. $|3 + x| + 8 > 32$
39. $5 \geq |b + 2|$
40. $7 < -|b + 11|$
41. $|x - 8| < 4$
42. $|y + 30| > 55$

Write the—conjunction or disjunction—inequality. (4.2)

43. 
44. 
45. 
46. 
47. 
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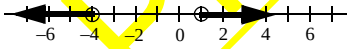
49. 
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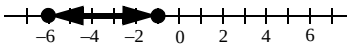
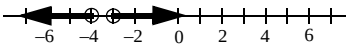
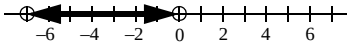
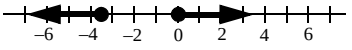
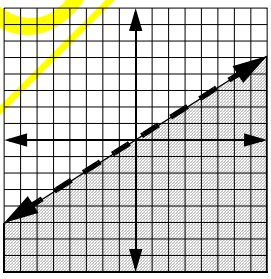
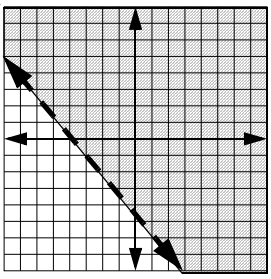
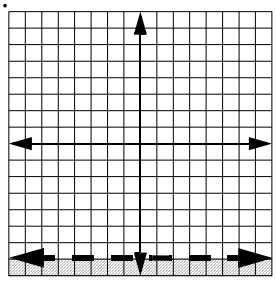
51. 
52. 
53. 
54. 

Graph the inequalities. (4.3)

55. $2y > x + 15$
56. $3y \geq -4x + 12$
57. $4y < x - 8$
58. $\frac{5}{6}x + \frac{6}{5}y \geq 18$
59. $5x - 6y > 12$
60. $y - 7x < 21$
61. $3 \geq 6x - 8y$
62. $9y \leq 2x - 14$
63. $\frac{1}{4}x + y \leq 1$
64. $8 > y - 2x$
65. $x + y \geq 5$
66. $y \leq \frac{3}{4}x - 4$
67. $3x - 4y < 6$
68. $4 \leq \frac{1}{4}x + y$
69. $4x + 2y < 5$
70. $y > 2$
71. $5y + x < 4$
72. $3x - 4y < 6$
73. $y > 2$
74. $5y + x < 4$

Write the inequality represented in the graph. (4.3)

75. 
76. 
77. 
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