

Chapter 6

Solve the inequality. Graph your solution.

- 6.1** 1. $y - 2 > 3$ 2. $5 + x \leq 2$ 3. $4 \geq x - 3$ 4. $m + 3 < 2$
5. $2 + n \leq 4\frac{1}{2}$ 6. $2\frac{3}{4} + n < -3\frac{5}{8}$ 7. $1\frac{7}{8} > 6\frac{3}{4} + z$ 8. $3\frac{2}{5} \geq 1\frac{1}{3} + k$
9. $-8.5 \leq t - 10$ 10. $r + 4 < -0.7$ 11. $-6.9 > -1.4 + y$ 12. $1.48 - m \geq -3.13$
- 6.2** 13. $3p \leq 27$ 14. $-13t > 26$ 15. $\frac{x}{3} \geq 2$ 16. $\frac{y}{-2} < 5$
17. $-6m \geq -9$ 18. $-3 \geq \frac{n}{2}$ 19. $0.3z \leq 2.4$ 20. $25 > -2.5s$
21. $4.8z \leq 3.2$ 22. $0.09d < -1.8$ 23. $\frac{y}{0.3} > -15$ 24. $-1.8t < 9$

6.3 Solve the inequality, if possible. Graph your solution.

25. $3x + 5 \geq 20$ 26. $6z - 5 < 13$ 27. $8(t + 4) > -8$
28. $7 - 8n \leq 4n - 17$ 29. $8(m + 2) < 4(5 + 2m)$ 30. $6d - 4 - 3d \geq 14$
31. $\frac{2}{3}y + 28 > 20 + 2y$ 32. $6(-5 + 3p) \geq 3(6p - 10)$ 33. $\frac{5}{6}(12z - 24) > \frac{2}{5}(25z - 25)$

6.4 Solve the inequality. Graph your solution.

34. $2 \leq y - 4 < 7$ 35. $-27 < 9x < 27$ 36. $2 < 6z - 10 < 20$
37. $15 < \frac{5}{9}(18a - 9) \leq 30$ 38. $2v > 12$ or $v + 2 < 6$ 39. $3r + 7 < -5$ or $32 \leq 7r + 46$
40. $-4m < 8$ or $2m - 2 < -12$ 41. $9t - 20 \geq 4t$ or $4 < \frac{1}{-2}t$ 42. $-n - 1 > 1$ or $2n + 8 > n + 8$

6.5 Solve the equation, if possible.

43. $|x| = 8$ 44. $|y| = -10$ 45. $|m + 6| = 5$ 46. $|4z - 2| = 14$
47. $|t - 7| = 21$ 48. $6|z - 4| = 36$ 49. $4|6s + 11| = -52$ 50. $|r + 3| - 16 = -4$
51. $|5r| + 10 = 15$ 52. $2|3s + 4| = 14$ 53. $-4|7v + 2| = 32$ 54. $12\left|\frac{5}{6}w - 4\right| - 4 = 8$

6.6 Solve the inequality. Graph your solution.

55. $|x| \leq 3$ 56. $|y| \geq 5$ 57. $|s| > 1.2$ 58. $|q| < \frac{2}{5}$
59. $|x + 2| > 6$ 60. $|y + 3| \leq 5$ 61. $|8 - m| < 3$ 62. $|4n - 1| \geq 7$
63. $3|p - 3| \leq 12$ 64. $|3q + 2| - 3 \geq 8$ 65. $2|5a - 1| + 3 \leq 11$ 66. $4\left|\frac{2}{3}c + 2\right| < 64$

6.7 Graph the inequality.

67. $y \geq x + 5$ 68. $y < x - 1$ 69. $4x + y > 3$ 70. $x \leq -5$
71. $3(x - 8) \leq 6y$ 72. $2x - y \geq -2$ 73. $y > 8$ 74. $2(x - 1) \geq 1 - y$
75. $x - 8 \leq y + 2$ 76. $2x \geq -2y$ 77. $3(y - 8) > x - 9$ 78. $2(-x - 1) \geq 4 + y$