

Independent Practice

For Exercises	See Example
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Online Extra Practice

Solve each inequality and graph the solutions.

27. $4(2 - x) \leq 5(x - 2)$ 28. $-3(n + 4) < 6(1 - n)$ 29. $9(w + 2) \leq 12w$
 30. $4.5 + 1.3t > 3.8t - 3$ 31. $\frac{1}{2}r + \frac{2}{3} \geq \frac{1}{3}r$ 32. $2(4 - n) < 3n - 7$

Solve each inequality.

33. $3(2 - x) < -3(x - 1)$ 34. $7 - y > 5 - y$ 35. $3(10 + z) \leq 3z + 36$
 36. $-5(k - 1) \geq 5(2 - k)$ 37. $4(x - 1) \leq 4x$ 38. $3(v - 9) \geq 15 + 3v$

Solve each inequality and graph the solutions.

39. $3t - 12 > 5t + 2$ 40. $-5(y + 3) - 6 < y + 3$
 41. $3x + 9 - 5x < x$ 42. $18 + 9p > 12p - 31$
 43. $2(x - 5) < -3x$ 44. $-\frac{2}{5}x \leq \frac{4}{5} - \frac{3}{5}x$
 45. $-2(x - 7) - 4 - x < 8x + 32$ 46. $-3(2r - 4) \geq 2(5 - 3r)$
 47. $-7x - 10 + 5x \geq 3(x + 4) + 8$ 48. $-\frac{1}{3}(n + 8) + \frac{1}{3}n \leq 1 - n$



Recreation

49. **Recreation** A red kite is 100 feet off the ground and is rising at 8 feet per second. A blue kite is 180 feet off the ground and is rising at 5 feet per second. How long will it take for the red kite to be higher than the blue kite? Round your answer to the nearest second.

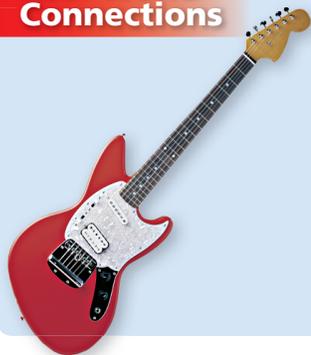
50. **Education** The table shows the enrollment in Howard High School and Phillips High School for three school years.

School Enrollment			
	Year 1	Year 2	Year 3
Howard High School	1192	1188	1184
Phillips High School	921	941	961

- How much did the enrollment change each year at Howard?
- Use the enrollment in year 1 and your answer from part **a** to write an expression for the enrollment at Howard in any year x .
- How much did the enrollment change each year at Phillips?
- Use the enrollment in year 1 and your answer from part **c** to write an expression for the enrollment at Phillips in any year x .
- Assume that the pattern in the table continues. Use your expressions from parts **b** and **d** to write an inequality that can be solved to find the year in which the enrollment at Phillips High School will be greater than the enrollment at Howard High School. Solve your inequality and graph the solutions.

The American Kitefliers Association has over 4000 members in 35 countries. Kitefliers participate in festivals, competitions, and kite-making workshops.

Real-World Connections



51. **a.** The school orchestra is creating a CD of their last concert. The total cost is $\$400 + 4.50$ per CD. Write an expression for the cost of creating the CDs based on the number of CDs n .
- b.** The orchestra plans to sell the CDs for $\$12$. Write an expression for the amount the orchestra earns from the sale of n CDs.
- c.** In order for the orchestra to make a profit, the amount they make selling the CDs must be greater than the cost of creating the CDs. Write an inequality that can be solved to find the number of CDs the orchestra must sell in order to make a profit. Solve your inequality.