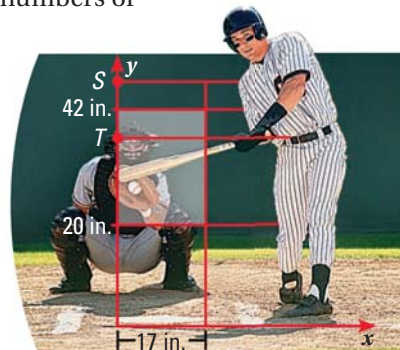


37. **MULTIPLE REPRESENTATIONS** The Junior-Senior Prom Committee must consist of 5 to 8 representatives from the junior and senior classes. The committee must include at least 2 juniors and at least 2 seniors. Let x be the number of juniors and y be the number of seniors.

- Writing a System** Write a system of inequalities to describe the situation.
- Graphing a System** Graph the system you wrote in part (a).
- Finding Solutions** Give two possible solutions for the numbers of juniors and seniors on the prom committee.

38. **BASEBALL** In baseball, the strike zone is a rectangle the width of home plate that extends from the batter's knees to a point halfway between the shoulders S and the top T of the uniform pants. The width of home plate is 17 inches. Suppose a batter's knees are 20 inches above the ground and the point halfway between his shoulders and the top of his pants is 42 inches above the ground. Write and graph a system of inequalities that represents the strike zone.



39. **TAKS REASONING** A person's theoretical maximum heart rate (in heartbeats per minute) is $220 - x$ where x is the person's age in years ($20 \leq x \leq 65$). When a person exercises, it is recommended that the person strive for a heart rate that is at least 50% of the maximum and at most 75% of the maximum.
- Write a system of linear inequalities that describes the given information.
 - Graph the system you wrote in part (a).
 - A 40-year-old person has a heart rate of 158 heartbeats per minute when exercising. Is the person's heart rate in the target zone? *Explain.*
40. **CHALLENGE** You and a friend are trying to guess the number of pennies in a jar. You both agree that the jar contains at least 500 pennies. You guess that there are x pennies, and your friend guesses that there are y pennies. The actual number of pennies in the jar is 1000. Write and graph a system of inequalities describing the values of x and y for which your guess is closer than your friend's guess to the actual number of pennies.



MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW

Lesson 1.3;
TAKS Workbook

41. **TAKS PRACTICE** What is the value of x in the equation $-6(-2x + 1) = -12(x - 3) - 6x$? **TAKS Obj. 2**

- (A) -7 (B) $-\frac{7}{5}$ (C) $\frac{7}{5}$ (D) 7

REVIEW

TAKS Preparation
p. 146;
TAKS Workbook

42. **TAKS PRACTICE** Rick enlarges a 4 inch by 6 inch digital photo using his computer. The dimensions of the resulting photo are 175% of the dimensions of the original photo. What are the dimensions of the enlarged photo? **TAKS Obj. 9**

- (F) 4.1 in. by 6.15 in. (G) 5.3 in. by 8 in.
(H) 7 in. by 10.5 in. (J) 11 in. by 16.5 in.

