

35. **CHALLENGE** A rectangle has vertices (1, 1), (1, 4), (5, 1), and (5, 4). Write a 2×4 matrix A whose columns are the vertices of the rectangle. Multiply matrix A by 3. In the same coordinate plane, draw the rectangles represented by the matrices A and $3A$. How are the rectangles related?



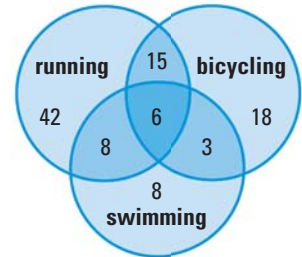
MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW

Skills Review Handbook
p. 1004;
TAKS Workbook

36. **TAKS PRACTICE** A health teacher surveyed 100 students to determine their favorite exercise activity or combination of exercise activities. The results are shown at the right. How many of the students surveyed chose only running as their favorite exercise activity? **TAKS Obj. 10**

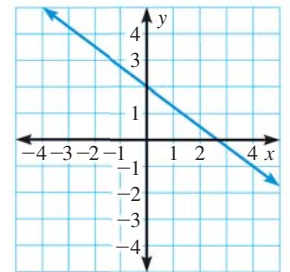


- (A) 13 (B) 29
(C) 42 (D) 71

REVIEW

Lesson 2.3;
TAKS Workbook

37. **TAKS PRACTICE** Which statement best describes the effect on the graph shown when the y -intercept is decreased by 4? **TAKS Obj. 3**



- (F) The x -intercept decreases.
(G) The slope decreases.
(H) The x -intercept increases.
(J) The slope increases.

QUIZ for Lessons 3.3–3.5

Graph the system of inequalities. (p. 168)

- | | | |
|---|---|----------------------------------|
| 1. $y < 6$
$x + y > -2$ | 2. $x \geq -1$
$-2x + y \leq 5$ | 3. $x + 3y > 3$
$x + 3y < -9$ |
| 4. $x - y \geq 4$
$2x + 4y \geq -10$ | 5. $x + 2y \leq 10$
$y \geq x + 2 $ | 6. $-y < x$
$2y < 5x + 9$ |

Solve the system using any algebraic method. (p. 178)

- | | | |
|---|---|--|
| 7. $2x - y - 3z = 5$
$x + 2y - 5z = -11$
$-x - 3y = 10$ | 8. $x + y + z = -3$
$2x - 3y + z = 9$
$4x - 5y + 2z = 16$ | 9. $2x - 4y + 3z = 1$
$6x + 2y + 10z = 19$
$-2x + 5y - 2z = 2$ |
|---|---|--|

Use matrices A , B , and C to evaluate the matrix expression, if possible. If not possible, state the reason. (p. 187)

$$A = \begin{bmatrix} 2 & -5 \\ 3 & -1 \end{bmatrix} \qquad B = \begin{bmatrix} -4 & 3 \\ 8 & 10 \end{bmatrix} \qquad C = \begin{bmatrix} -6 & -2 & 9 \\ 1 & -4 & -1 \end{bmatrix}$$

10. $A + B$ 11. $B - 2A$ 12. $3A + C$ 13. $\frac{2}{3}C$

14. **APPLES** You have \$25 to spend on 21 pounds of three types of apples. Empire apples cost \$1.40 per pound, Red Delicious apples cost \$1.10 per pound, and Golden Delicious apples cost \$1.30 per pound. You want twice as many Red Delicious apples as the other two kinds combined. Use a system of equations to find how many pounds of each type you should buy. (p. 178)