

# Chapter 3 Cumulative Review CP Alg. 2

## Multiple Choice

For Exercises 1–10, choose the correct letter.

1. Which line is parallel to  $y = \frac{3}{2}x + \frac{2}{3}$ ?  
 A  $y = \frac{3}{2}x + 6$      B  $y = 3x + \frac{2}{3}$      C  $y = \frac{2}{3}x + \frac{3}{2}$      D  $y = \frac{6}{3}x + \frac{2}{3}$
2. Which is a solution of the system of inequalities?  

$$\begin{cases} y - 4 > 0 \\ y \geq x + 1 \end{cases}$$
 F (3, 3)     G (-1, 2)     H (1, 5)     I (0, 2)
3. What point in the feasible region maximizes  $C$  for the objective function  $C = 4x - 2y$ ?  
 A (9, 0)     B (-2, -20)     C (-5, -2)     D (0, -9)
4. Which number is rational but not an integer?  
 F 1,000,000     G  $\sqrt{16}$      H 11     I 0.25
5. The data in a scatter plot can be modeled by the equation  $y = -x$ . What kind of correlation is this?  
 A horizontal     B negative     C vertical     D positive
6. What is the value of the expression  $3a^2 - 2a + 1$  evaluated at  $a = -2$ ?  
 F -7     G 9     H 17     I -15
7. Which of the following best describes the transformations used to obtain the graph of  $y = -|x + 1| - 3$  from the graph of  $y = |x|$ ?  
 A Reflect across the  $x$ -axis, shift right one unit and down three units.  
 B Reflect across the  $x$ -axis, shift left one unit and down three units.  
 C Reflect across the  $y$ -axis, shift left one unit and up three units.  
 D Reflect across the  $y$ -axis, shift right one unit and down three units.
8. What is the solution of the inequality  $2(3 + 2x) + 3 \geq -2(3 + x)$ ?  
 F all real numbers     G no real numbers     H  $x \geq -\frac{5}{2}$      I  $x \leq -5$
9. What is the slope of the line through the points (5, -4) and (-3, 7)?  
 A  $\frac{11}{8}$      B  $-\frac{11}{8}$      C  $-\frac{8}{11}$      D  $\frac{8}{11}$

10. Which graph shows the system represented by the matrix?  $\begin{bmatrix} 0 & 3 & 9 \\ -4 & -1 & 5 \end{bmatrix}$

