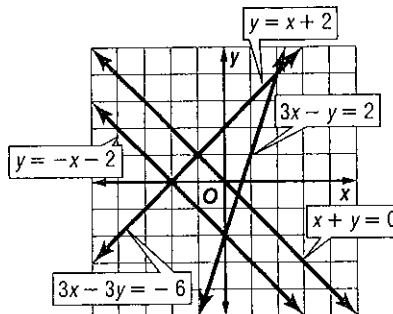


Write the letter for the correct answer in the blank at the right of each question.

Use the graph for Questions 1–4.

For Questions 1 and 2, determine how many solutions exist for each system of equations.



- | | | |
|--|---|---|
| <p>A. no solution</p> <p>B. one solution</p> <p>C. infinitely many solutions</p> <p>D. cannot be determined</p> | <p>1. $3x - 3y = -6$
$y = x + 2$</p> <p>2. $x + y = 0$
$3x - y = 2$</p> | <p>1. _____</p> <p>2. _____</p> |
| <p>3. The solution to which system of equations has a positive x value?</p> | | |
| <p>A. $x + y = 0$
$3x - y = 2$</p> | <p>B. $3x - y = 2$
$y = -x - 2$</p> | <p>C. $x + y = 0$
$3x - 3y = -6$</p> |
| <p>D. $y = -x - 2$
$x + y = 0$</p> | <p>3. _____</p> | |
| <p>4. The solution to which system of equations has a y value less than -1?</p> | | |
| <p>A. $x + y = 0$
$3x - y = 2$</p> | <p>B. $3x - y = 2$
$y = -x - 2$</p> | <p>C. $x + y = 0$
$3x - 3y = -6$</p> |
| <p>D. $y = -x - 2$
$x + y = 0$</p> | <p>4. _____</p> | |
| <p>5. When solving the system of equations, which expression could be substituted for y in the second equation?</p> | | |
| <p>A. $3 - 4y$</p> | <p>B. $\frac{3 - x}{4}$</p> | <p>C. $\frac{14 - y}{3}$</p> |
| <p>D. $14 - 3x$</p> | <p>5. _____</p> | |
| <p>6. If $x = 5y - 1$ and $2x + 5y = -32$, what is the value of y?</p> | | |
| <p>A. -2</p> | <p>B. 2</p> | <p>C. 1</p> |
| <p>D. -1</p> | <p>6. _____</p> | |
| <p>7. Use elimination to solve the system $3x + 5y = 16$ and $8x - 5y = 28$ for x.</p> | | |
| <p>A. -6</p> | <p>B. 5</p> | <p>C. 4</p> |
| <p>D. $\frac{4}{5}$</p> | <p>7. _____</p> | |
| <p>8. Use elimination to solve the system $x - 4y = 1$ and $x + 2y = 19$ for x.</p> | | |
| <p>A. -11</p> | <p>B. 3</p> | <p>C. 25</p> |
| <p>D. 13</p> | <p>8. _____</p> | |
| <p>9. Use elimination to solve the system $4x + 7y = -14$ and $8x + 5y = 8$ for x.</p> | | |
| <p>A. $3\frac{1}{2}$</p> | <p>B. $-1\frac{1}{2}$</p> | <p>C. 8</p> |
| <p>D. -4</p> | <p>9. _____</p> | |
| <p>10. Use elimination to solve the system $5x + 4y = -10$ and $3x + 6y = -6$ for y.</p> | | |
| <p>A. -2</p> | <p>B. -5</p> | <p>C. 0</p> |
| <p>D. 2</p> | <p>10. _____</p> | |
| <p>11. The substitution method should be used to solve which system of equations?</p> | | |
| <p>A. $5x - 7y = 16$
$2x - 7y = 12$</p> | <p>B. $4x + 3y = -5$
$6x - 3y = 2$</p> | <p>C. $x = 3y + 1$
$2x + y = 7$</p> |
| <p>D. $2x + 6y = 3$
$3x + 2y = -1$</p> | <p>11. _____</p> | |
| <p>12. The elimination method using addition should be used to solve which system of equations?</p> | | |
| <p>A. $y = -4x + 1$
$x - 2y = 7$</p> | <p>B. $x + 2y = -4$
$3x - 2y = -1$</p> | <p>C. $5x + y = -6$
$5x - 2y = 3$</p> |
| <p>D. $x - 4y = -9$
$-8x - y = 1$</p> | <p>12. _____</p> | |

7

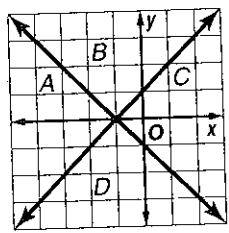
Chapter 7 Test, Form 2B (continued)

13. State which region in the graph is the solution of the system.

$$x + 1 \leq y$$

$$-x - 1 \leq y$$

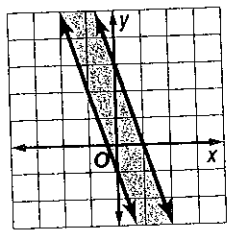
- A. A B. B
C. C D. D



13. _____

14. Which system of inequalities is represented by the graph?

- A. $y < -3x + 3$ B. $y \geq -3x + 3$
 $y > -3x - 1$ $y \leq -3x - 1$
 C. $y \leq -3x + 3$ D. $y > -3x + 3$
 $y \geq -3x - 1$ $y < -3x - 1$



14. _____

For Questions 15 and 16, solve the system and find the value of y.

15. $2x + 3y = 1$ A. $-8\frac{3}{7}$ B. $8\frac{3}{7}$ C. -3 D. 3
 $5x - 4y = -32$

15. _____

16. $6x + 3y = 12$ A. -20 B. $-1\frac{9}{11}$ C. 20 D. $1\frac{9}{11}$
 $5x + 3y = 0$

16. _____

17. Five times one number minus two times a second number is 11.
 Three times the first number minus two times the second number is 1.
 What are the numbers?

- A. 5 and 7 B. 2 and 5 C. 11 and 1 D. 4 and -6

17. _____

18. Colortime Bakers wants to make 30 pounds of a berry mix that costs \$3 per pound to use in their pancake mix. They are using blueberries that cost \$2 per pound and blackberries that cost \$3.50 per pound. How many pounds of blackberries should be used in this mixture?

- A. 15 lb B. 20 lb C. 10 lb D. 30 lb

18. _____

19. In 1999, there were 69,063 physicians specializing in Family Practice in the United States and its possessions. The number of male physicians minus the number of female physicians in this category is 31,289. How many female physicians were there that specialized in Family Practice in the United States?

- A. 50,176 B. 34,531 C. 3243 D. 18,887

19. _____

20. Beng and Shim make boat-shaped candles and dog-shaped candles. They have enough materials to make 40 candles. Beng and Shim will make at most 20 boat-shaped candles. They will also make less than 35 dog-shaped candles. Which system of inequalities represents this information?

- A. $5 < b \leq 20$ B. $20 + d \leq 40$ C. $b + d \leq 40$ D. $0 \leq b < 20$
 $20 \leq d < 35$ $b + 35 \leq 40$ $0 \leq b \leq 20$ $0 \leq d \leq 35$
 $0 \leq d < 35$

20. _____

Bonus Manuel is 8 years older than his sister. Three years ago he was 3 times older than his sister. How old is each now?

B: _____

Chapter 7 Assessment Answer Key

Form 2A (continued)

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13. C

14. A

15. A

16. C

17. D

18. D

19. B

20. D

B: $\left(-7, -3\frac{1}{2}\right)$

Form 2B

Page 437

1. C

2. B

3. A

4. B

5. D

6. A

7. C

8. D

9. A

10. C

11. C

12. B

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13. B

14. C

15. D

16. A

17. A

18. B

19. D

20. C

Manuel is 15 years old;
B: his sister is 7 years old.