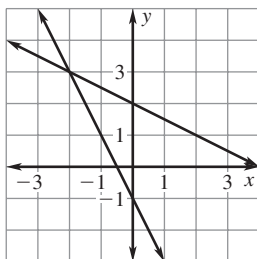


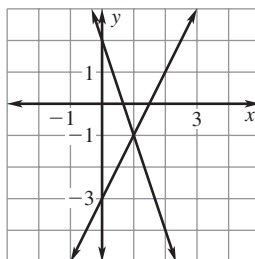
CHAPTER 7 **Chapter Test A**
For use after Chapter 7

Use the graph to solve the linear system.

1. $x + 2y = 4$
 $2x + y = -1$



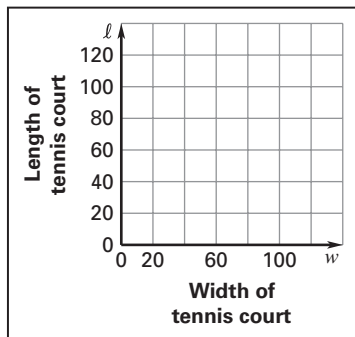
2. $2x - y = 3$
 $3x + y = 2$



In Exercises 3–5, use the following information.

You are painting the white lines around the perimeter of a tennis court. You measure and find that the perimeter is 228 feet and the length is 42 feet longer than the width.

3. Write a linear system. Let w be the width of the tennis court and let ℓ be the length of the tennis court.
4. Graph the linear system.



5. Find the length and width of the tennis court.

Solve the linear system using substitution.

6. $x = 2$
 $3x + 2y = 4$

7. $3x - 2y = 6$
 $y = 3$

8. $x = y + 1$
 $x + 2y = 7$

9. $3x - y = 2$
 $y = 2x - 9$

10. $3x + y = 4$
 $4x - 3y = 1$

11. $x + y = 12$
 $3x - 2y = 6$

12. A cosmetologist has a bottle of 7% hydrogen peroxide solution and a bottle of 4% hydrogen peroxide solution. The cosmetologist needs 300 milliliters of a 5% hydrogen peroxide solution for a hair dye. Write and solve a linear system to find how many milliliters of each solution the cosmetologist needs to mix together.

Answers

1. _____
2. _____
3. _____
4. See left.
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

CHAPTER
7

Chapter Test A *continued*
For use after Chapter 7

Solve the linear system using elimination.

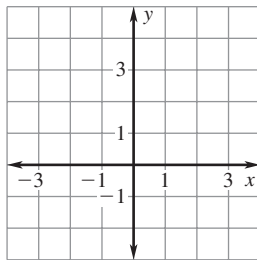
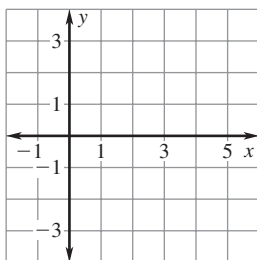
- | | | |
|-------------------------|--------------------------|---------------------------|
| 13. $x + y = 4$ | 14. $9x + 2y = 4$ | 15. $4x - 5y = 22$ |
| $x - y = 6$ | $9x - y = 25$ | $x + 2y = -1$ |
| 16. $x - 2y = 4$ | 17. $4x + 3y = 7$ | 18. $2x - 3y = 16$ |
| $3x + 4y = 2$ | $7x + 2y = 9$ | $3x + 4y = 7$ |

Determine whether the linear system has one solution, no solution, or infinitely many solutions.

- | | | |
|-------------------------|--------------------------|-------------------------|
| 19. $y = 2x - 1$ | 20. $3x + y = 12$ | 21. $3x - y = 5$ |
| $y = 2x + 1$ | $y = 3x + 12$ | $y = 3x - 5$ |

Graph the system of linear inequalities.

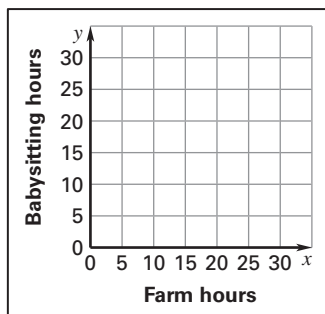
- | | |
|---------------------|--------------------|
| 22. $y < -1$ | 23. $y > 1$ |
| $x > 2$ | $y \leq x + 3$ |



In Exercises 24 and 25, use the following information.

During the summer, you want to earn at least \$150 per week. You earn \$10 per hour working for a farmer, and you earn \$5 per hour babysitting for your neighbor. You can work at most 25 hours per week.

- 24.** Write and solve a system of linear inequalities that models the situation. Let x be the number of hours per week working on the farm and let y be the number of hours per week babysitting.



- 25.** If you work 10 hours per week on the farm and 12 hours per week babysitting, will you earn at least \$150?

Answers

- 13.** _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. See left.
23. See left.
24. _____

25. _____
