Name

5-3B Lesson Master

Questions on SPUR Objectives
See Student Edition pages 367–371 for objectives.

VOCABULARY

1. **Fill in the Blanks** A *consistent system* has _____ solution(s), while an *inconsistent system* has _____ solution(s).

SKILLS Objective A

In 2–9, solve using the substitution method.

2. $\begin{cases} y = x - 7 \\ y = -2x + 5 \end{cases}$

3. $\begin{cases} y = 3x + 13 \\ y = x + 1 \end{cases}$

4. $\begin{cases} 3m - 2n = 1 \\ 21m - 6n = 11 \end{cases}$

5. $\begin{cases} xy = -4 \\ x = -4y \end{cases}$

6. $\begin{cases} 0.25x + 0.1y = 78 \\ 7.5y - 1.5x = 990 \end{cases}$

7. $\begin{cases} 4a + 6b - 3c = -26 \\ b = a + 3 \\ c = -4a \end{cases}$

8. $\begin{cases} xy + z = 10 \\ z = -x + 1 \\ y = x + 1 \end{cases}$

9. $\begin{cases} y = \frac{1}{2}x + 1 \\ x - 2y = -2 \end{cases}$

PROPERTIES Objective D

In 10–12, determine whether the system is *consistent* or *inconsistent*.

10. $\begin{cases} 5y = 10x + 20 \\ y = 2x + 4 \end{cases}$ _____

11. $\begin{cases} y = -\frac{1}{4}x + 6 \\ 4y + x = 48 \end{cases}$ _____

12. $\begin{cases} 7x - y = -3 \\ 2x + y = -6 \end{cases}$ _____

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13. When you attempt to solve a system of two linear equations, you get the statement "5 = 19".

    a. What does this tell you about the solution? _____

    b. Describe the graph. _____

14. When you attempt to solve a different system of two linear equations, you get the statement "8 = 8".

    a. What does this tell you about the solution? _____

    b. Describe the graph. _____

USES Objective F

15. At Get Pets, a starter aquarium kit costs \$15 plus 60¢ per fish. At Gills and Frills, the same kit is \$13 plus 80¢ per fish.

    a. Give an equation for the cost c of a kit with f fish at each store.

    Get Pets _____

    Gills and Frills _____

    b. For what number of fish is the cost the same at the two stores? _____

16. A Valentine bouquet of 24 flowers contains pink carnations, red roses, and white mums. There are half as many mums as carnations and 4 more roses than carnations.

    a. Let c be the number of carnations, r be the number of roses, and m be the number of mums. Write a system of three equations satisfied by c, r, and m in this situation. _____

    b. Solve the system to find how many of each type of flower are in the bouquet.

    Carnations _____ Roses _____ Mums _____

17. Three-bean salad can be made by mixing green, kidney, and wax beans. The recipe calls for the same amount of kidney beans and wax beans and twice as much green beans as kidney beans. Let g be the number of cups of green beans, k be the number of cups of kidney beans, and w be the number of cups of wax beans. Determine how much of each kind of bean should be used for nine cups of salad.

    green _____ kidney _____ wax _____