Name _____

4-4B Lesson Master

Questions on SPUR Objectives
See pages 245–249 for objectives.

SKILLS Objective A

In 1–16, solve and check.

1. $25x = 10 - 5x$

2. $5k + 21 = 17k - 3$

3. $45m - 38 = 5m - 158$

4. $6a = 60 + 36a$

5. $15y + 5y - 6 = 17y$

6. $-3(2b - 5) = 3b$

7. $7t = 13t - 5 + 4t$

8. $\frac{h}{3} + \frac{2}{3} = \frac{h}{2} + \frac{2}{5}$

9. $\frac{1}{4}(j - 8) = \frac{1}{2}j + 2$

10. $5(3n + 10) = 40n$

11. $4(h + 1) = 2(5h + 6)$

12. $\frac{1}{5}\left(s + \frac{2}{3}\right) - \frac{3}{10}s = \frac{-1}{5}$

13. $4 - \frac{5x}{7} = x - 2$

14. $5(2z + 1) = 5(z - 5)$

15. $\frac{2}{3}f + 6 = \frac{f}{4} - 2$

16. $8 + \frac{c}{9} = 2\left(\frac{c}{3} - 1\right)$

Name _____

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PROPERTIES   Objective F

17. Solve $2x + 5 = 3x + 6$ ...

    a. by first adding $-2x$ to both sides.   _____

    b. by first adding $-3x$ to both sides.   _____

    c. Compare your answers. What does this mean?

    _____

18. In solving $2x + 6 = -x$, what advantage does adding $-2x$ to both sides
    have over adding $x?$

    _____

In 19, a sentence is solved. Fill in what was done.

19. $\frac{7}{4}(y - 2) = 2y + \frac{9}{2}$

    $7(y - 2) = 8y + 18$ _____

      $7y - 14 = 8y + 18$ _____

        $-y - 14 = 18$ _____

          $-y = 32$ _____

           $y = -32$ _____

USES   Objective H

20. At 10 A.M., a freight train leaves Chicago for Denver traveling at an
average speed of 60 miles per hour. Two hours later, a high-speed
passenger train leaves Chicago for Denver traveling at an average
speed of 150 miles per hour.

    a. After how many hours will the passenger train overtake   _____
        the freight train?

    b. What will the time be?   _____

21. Suppose that Northwoods has a population of 33,300 people but
increases by 4,000 people every year. Neighboring Forest Hills has a
population of 52,000 but *decreases* by 2,000 every year. To the nearest
tenth of a year, how long will it be until the two cities have the same
number of residents?   _____