Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Due Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Hour\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 0 Review

Name the property that each equation illustrates.

1. (17 + 4) + 9 = 17 + ( 4 + 9)

2. 7(3 + 4) = (7 · 3) + (7 · 4)

3. 84 · 26 = 26 · 84

4. (3 · 6) · 7 = 3 · (6 · 7)

5. 8(6 – 3) = (8 · 6) – (8 · 3)

6. 4.2 + 3.4 = 3.4 + 4.2

Solve each equation. If appropriate, write identity or no solution.

7. 7 – 2n = n – 14

8. 2 (4 – 2r) = -2(r + 5)

9. 3d + 8 = 2d – 7

10. 6t = 3(t + 4) -t

11. 8z – 7 = 3z – 7 + 5z

12. 3(n -1) = 5n + 3 – 2n

13. A passenger train’s speed is 60 mi/h, and a freight train’s speed is 40 mi/h. The passenger train travels the same distance in 1.5 h less time than the freight train. How long does each train take to make the trip?

|  |  |  |  |
| --- | --- | --- | --- |
| Train | Rate | Time | Distance |
| Passenger |  |  |  |
| Freight |  |  |  |

14. The length of a rectangle is 4 in. greater than the width. The perimeter of the rectangle is 24 in. Find the dimensions of the rectangle.

15. The sum of four consecutive odd integers is 216. Find the four integers.

16. Find three consecutive integers whose sum is 126.

17. Lois rode her bike to visit a friend. She traveled at 10 mi/h. While she was there, it began to rain. Her friend drove her home in a car traveling at 25 mi/h. Lois took 1.5 h longer to go to her friend’s than to return home. How many hours did it take Lois to ride to her friend’s house?

|  |  |  |  |
| --- | --- | --- | --- |
| Part of trip | Rate | Time | Distance |
| To friend’s house |  |  |  |
| To home |  |  |  |

18. At 10:00 AM, a car leaves a house at a rate of 60 mi/h. At the same time, another car leaves the same house at a rate of 50 mi/h in the opposite direction. At what time will the cars be 330 miles apart?

|  |  |  |  |
| --- | --- | --- | --- |
| Car | Rate | Time | Distance |
| 1 |  |  |  |
| 2 |  |  |  |

Solve each formula in terms of the given variable.

19. 2(j + k) = m ; k

20. A = 2h( *l* + w) ; h

21. P = $\frac{F}{A}$ ; A

22. w = 2xyz ; y

23. V = $\frac{1}{3}$ *l*wh ; w

24. $\frac{5}{2}$ = $\frac{1}{2}$ (b – c) ; b