1.1–1.3 Quiz

Solve the equation. Justify each step. Check your solution. *(Section 1.1)*

1. $x + 9 = 7$

2. $8.6 = z - 3.8$

3. $60 = -12r$

4. $\frac{3}{4}p = 18$

Solve the equation. Check your solution. *(Section 1.2)*

5. $2m - 3 = 13$

6. $5 = 10 - v$

7. $5 = 7w + 8w + 2$

8. $-21a + 28a - 6 = -10.2$

9. $2k - 3(2k - 3) = 45$

10. $68 = \frac{1}{5}(20x + 50) + 2$

Solve the equation. *(Section 1.3)*

11. $3c + 1 = c + 1$

12. $-8 - 5n = 64 + 3n$

13. $2(8q - 5) = 4q$

14. $9(y - 4) - 7y = 5(3y - 2)$

15. $4(g + 8) = 7 + 4g$

16. $-4(-5h - 4) = 2(10h + 8)$

17. To estimate how many miles you are from a thunderstorm, count the seconds between when you see lightning and when you hear thunder. Then divide by 5. Write and solve an equation to determine how many seconds you would count for a thunderstorm that is 2 miles away. *(Section 1.1)*

18. You want to hang three equally-sized travel posters on a wall so that the posters on the ends are each 3 feet from the end of the wall. You want the spacing between posters to be equal. Write and solve an equation to determine how much space you should leave between the posters. *(Section 1.2)*

19. You want to paint a piece of pottery at an art studio. The total cost is the cost of the piece plus an hourly studio fee. There are two studios to choose from. *(Section 1.3)*

a. After how many hours of painting are the total costs the same at both studios? Justify your answer.

b. Studio B increases the hourly studio fee by $2. How does this affect your answer in part (a)? Explain.