**Solving Linear Equations Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** *Multiple choice.*

1. If x + 37 = 78, what is x?

(a) -36 (b) 36 (c) -41 (d) 41

2. If x – 12 = 42, what is x?

(a) 64 (b) 30 (c) 54 (d) 34

3. Which value of x will make the sentence true? 4x – 2 = 22

(a) 5 (b) 6 (c) 16 (d) 20

4. If 4x + 6 = 54, what is x?

(a) 7 (b) 12 (c) 13 (d) 8

5. If , what is n?

(a) -48 (b) 14 (c) 8 (d) 2

6. If 12x – 8 = 124, what is x?

(a) 8 (b) 10 (c) 14 (d) 11

7. Solve for x: x – 7 = -9

(a) 2 (b) -2 (c) -11 (d) -16

8. What number would replace n in this equation to make it true? 2n – 8 = 16

(a) 4 (b) 6 (c) 8 (d) 12

9. Solve for x: -2(x – 8) = 20

(a) -2 (b) -10 (c) -18 (d) 18

10. Dane is three years older than twice his brother’s age, b. If the sum of their ages is 27, find Dane’s age.

(a) 8 (b) 12 (c) 15 (d) 19

11. The sum of the distance, m, and 24, divided by 7, is 11. Find m.

(a) 18 (b) 31 (c) 53 (d) 77

12. Solve for n. 4n + 3 = 6n – 3

(a) -3 (b) 3 (c) 0 (d) -0.6

13. Solve for x. 

(a) -7 (b) -1.4 (c) 2 (d) 7

14. Solve for x. 4x + 9 = 3 – (x – 2)

(a) -9 (b)  (c)  (d) 

15. Solve for y. 6y – 3(y + 5) = 3(y – 2)

(a) -15 (b) -6 (c) No solution (d) Any real number

16. Solve for a. 3(a + 6) – 2a = a + 18

(a) 18 (b) -18 (c) No solution (d) Any real number

17. Solve for x. 0.30(40) + 0.25(300) = 0.60x

(a) 86.4 (b) 52.2 (c) 145 (d) No solution

**Do your best!**

**Rise to the challenge!**

**Live and learn!**

18. Solve for c. 4(2c – 1) = –6(c + 3)

(a) 1 (b)  (c) -7 (d) -1

Solve for the variable.

19. 3x + 5 = 53 20. 2(p – 3) = 3p + 4

21.  22. 

23. 3 = 3(2y – 5) – (3y – 1) 24. 

25. -7n + 3n = -3 + n + 20 26. -2q – 2 = -2

27. 10w + 3 – 4w + 4 = -2w + 3 + 7w 28. -2(4 – x) = 3(2x + 5)

29.  30. 

31.  32. 5(2 – x) + 8x = 3(x – 6)

33. -6(2x + 1) – 14 = -10(x + 2) – 2x 34. 0.06x – 0.10(x – 2) = -0.02(8)



35. When Fred started working with his company, he was given an hourly rate of $8.50 per hour for regular hours (at most 40) and “time and a half” for overtime hours (over 40). If he earns $442 one week, how many hours did he work?

36. A Japanese “bullet” train set a new world record for train speed at 361 miles per hour during a manned test run on the Yamanashi Maglev Test Line in 2003. How long does it take this train to travel 108.3 miles at this speed? Give the result in hours; then convert to minutes.

37. A wood deck is being built behind a house. The width is 12 feet. If there is 168 square feet of decking material, find the length of the deck.

38. (a) A 16-foot board is to be cut so that the longer piece is 5 times longer than the shorter piece. Find the length of each piece.

(b) A 16-foot wire is to be cut so that the longer piece is 5 feet longer than the shorter piece. Find the length of each piece.