

Algebra 104 Solving Algebraic Equations

Directions: Solve each equation.

Part 1: One-Step Algebra Equations

1. $x + 5 = 12$

Answer: _____

2. $x - 3 = 10$

Answer: _____

3. $2x = 14$

Answer: _____

4. $x / 4 = 3$

Answer: _____

5. $x - 9 = -2$

Answer: _____

6. $x + 7 = 0$

Answer: _____

7. $-x = 6$

Answer: _____

8. $x / 5 = -3$

Answer: _____

9. $-3x = 12$

Answer: _____

10. $x + 1 = -4$

Answer: _____



Part 2: Multi-Step Algebra Equations

11. $2x + 3 = 11$

Answer: _____

12. $3x - 5 = 10$

Answer: _____

13. $4x + 2 = 2x + 10$

Answer: _____

14. $5x - 3 = 2x + 9$

Answer: _____

15. $6 - 2x = 4x + 12$

Answer: _____

16. $3(x - 2) = 12$

Answer: _____

17. $2(x + 5) = 3x - 4$

Answer: _____

18. $4x - 7 = 5x + 2$

Answer: _____

19. $3x + 6 = 2x - 1$

Answer: _____

20. $2(x - 1) + 3 = 9$

Answer: _____



Part 3: One-Step Algebra Word Problems

21. The difference of four times a number and 7 is 15 plus the quotient of the number and 3.

What is the equation that can find the value of x ?

Answer: _____

22. A number divided by 4 is 5. What is the number?

Answer: _____

23. If 3 times a number is 15, what is the number?

Answer: _____

24. A book costs \$ x . If you pay with \$10 and get \$4 back, what is x ?

Answer: _____

25. Subtracting 6 from a number gives 2. What is the number?

Answer: _____

Part 4: Multi-Step Algebra Word Problems

26. Twice a number plus 3 is 11. What is the number?

Answer: _____

27. Three times a number minus 2 equals 10. What is the number?

Answer: _____

28. Sarah's age is 4 more than twice Tom's age. If Sarah is 22, how old is Tom?

Answer: _____

29. A number minus 5 equals twice the number plus 1. What is the number?

Answer: _____

30. If 5 more than 3 times a number is 20, what is the number?

Answer: _____



Directions: Read each problem carefully and choose the correct answer. Circle or mark your choice.

31. Jane is 4 years older than twice her brother's age. If Jane is 22 years old, how old is her brother?

- A. 9
- B. 10
- C. 8
- D. 11

32. A number minus 5 equals twice the number plus 1. What is the number?

- A. -4
- B. -5
- C. -6
- D. -3

33. If 5 more than 3 times a number is 20, what is the number?

- A. 4
- B. 5
- C. 3
- D. 6

34. Twice a number plus 6 equals 20. What is the number?

- A. 8
- B. 6
- C. 7
- D. 10

35. Three times a number decreased by 4 equals 17. What is the number?

- A. 6
- B. 5
- C. 7
- D. 8



Answer Key

1. $x = 7$

22. $x = 20$

2. $x = 13$

23. $x = 5$

3. $x = 7$

24. $x = 6$

4. $x = 12$

25. $x = 8$

5. $x = 7$

26. $x = 4$

6. $x = -7$

27. $x = 4$

7. $x = -6$

28. $x = 9$

8. $x = -15$

29. $x = -6$

9. $x = -4$

30. $x = 5$

10. $x = -5$

31. A. 9

11. $x = 4$

32. C. -6

12. $x = 5$

33. B. 5

13. $x = 4$

34. A. 7

14. $x = 4$

35. C. 7

15. $x = -1$

16. $x = 6$

17. $x = 14$

18. $x = -9$

19. $x = -7$

20. $x = 4$

21. $4x - 7 = \frac{x}{3} + 15$

