

- _____ 18. What is the first operation necessary to solve the equation $\frac{x}{3} + 5 = -7$?
- A. subtract 5
B. multiply by 3
C. divide by 3
D. add 5
- _____ 19. The number of hours that Blaine worked is five more than one quarter the hours worked by Steve. Blaine worked 25 hours. This situation can be represented by the equation $\frac{h}{4} + 5 = 25$. How many hours did Steve work?
- A. 4
B. 20
C. 25
D. 80
- _____ 20. The number of hours that Blaine worked is five more than one quarter the hours worked by Steve. Blaine worked 25 hours. How many hours did Blaine work?
- A. 5
B. 6.25
C. 11.25
D. 25
- _____ 21. What is the solution to the equation $4 + \frac{n}{3} = -2$?
- A. 18
B. 10
C. -10
D. -18
- _____ 22. What is the solution to the equation $4(x - 2) = 16$?
- A. 12
B. 6
C. -6
D. -12
- _____ 23. What is the solution to the equation $2(x + 2) = -4$?
- A. -2
B. -3
C. -4
D. -6
- _____ 24. Solve $-5(x + 5) = -25$.
- A. 0
B. -1
C. -5
D. -25
- _____ 25. When solving the equation $-2(x + 6) = 4$ in the most efficient way, what is the first operation that should be performed?
- A. subtract 6
B. multiply by -2
C. divide by -2
D. add 6
- _____ 26. Julia made a mistake solving an equation. At what step did she make her mistake?
- A** $3(x - 5) = 21$
- B** $(x - 5) = \frac{21}{3}$
- C** $(x - 5) + 5 = 7 - 5$
- D** $x = -2$
- A. A
B. B
C. C
D. D

Matching

Match the correct solution with the corresponding equation.

A. -25

E. 8

B. -24

F. 24

C. -14

G. 28

D. -4

H. 32

27. $\frac{n}{4} = 7$

28. $3(x - 4) = 12$

29. $\frac{t}{6} + 2 = -2$

30. $4x = 96$

31. $2(p - 3) = -14$

Short Answer: Answer on a separate piece of paper.

32. Todd is solving the equation $t + 14 = 28$. What is wrong with his solution?

$$t + 14 = 28$$

$$t + 14 - 28 = 28 + 28$$

$$t - 14 = 0$$

33. Demi charges \$12 to cut and rake one lawn. She earned \$1176 for the summer.

a) Model this situation using an equation.

b) Solve the equation to determine how many lawns she cut and raked over the summer.

34. Sumiko bought one pair of jeans for \$10.00 and several shirts for \$14.00 each. If Sumiko spent a total of \$66.00, how many shirts did she buy?

35. Solve the equation. Verify your answer.

$$2x + 3.5 = 11.5$$

36. Describe a situation that can be modelled with the equation $5x + 15 = 25$.

37. A rectangular garden has a length of 24 m and a perimeter of 92 m. Write and solve an equation to determine the width, w . Verify your solution.

38. When a sum of money is divided equally among three people, each person receives \$25. Write and solve an equation to determine the value of the sum of money. Verify your solution.

Solving Equations Extra Practice

Answer Section

MULTIPLE CHOICE

- | | |
|------------|-------------------|
| 1. ANS: C | OBJ: Section 10.1 |
| 2. ANS: B | OBJ: Section 10.1 |
| 3. ANS: D | OBJ: Section 10.1 |
| 4. ANS: C | OBJ: Section 10.1 |
| 5. ANS: D | OBJ: Section 10.1 |
| 6. ANS: B | OBJ: Section 10.2 |
| 7. ANS: A | OBJ: Section 10.2 |
| 8. ANS: C | OBJ: Section 10.2 |
| 9. ANS: A | OBJ: Section 10.2 |
| 10. ANS: A | OBJ: Section 10.2 |
| 11. ANS: B | OBJ: Section 10.2 |
| 12. ANS: A | OBJ: Section 10.2 |
| 13. ANS: D | OBJ: Section 10.2 |
| 14. ANS: A | OBJ: Section 10.3 |
| 15. ANS: D | OBJ: Section 10.3 |
| 16. ANS: C | OBJ: Section 10.3 |
| 17. ANS: B | OBJ: Section 10.3 |
| 18. ANS: A | OBJ: Section 10.3 |
| 19. ANS: D | OBJ: Section 10.3 |
| 20. ANS: C | OBJ: Section 10.3 |
| 21. ANS: D | OBJ: Section 10.3 |
| 22. ANS: B | OBJ: Section 10.4 |
| 23. ANS: C | OBJ: Section 10.4 |
| 24. ANS: A | OBJ: Section 10.4 |
| 25. ANS: C | OBJ: Section 10.4 |
| 26. ANS: C | OBJ: Section 10.4 |

MATCHING

- | | |
|------------|-------------------|
| 27. ANS: G | OBJ: Section 10.1 |
| 28. ANS: E | OBJ: Section 10.4 |
| 29. ANS: B | OBJ: Section 10.3 |
| 30. ANS: F | OBJ: Section 10.1 |
| 31. ANS: D | OBJ: Section 10.4 |

SHORT ANSWER

32. ANS:

Answers may vary. Example: Todd subtracted 28 from both sides instead of subtracting 14 from both sides.

OBJ: Section 10.2

33. ANS:

a) $12x = 1176$

b) $12x = 1176$

$$x = \frac{1176}{12}$$

$$x = 98$$

Demi cut and raked 98 lawns over the summer.

OBJ: Section 10.1

34. ANS:

$$14s + 10 = 66$$

$$14s = 56$$

$$s = \frac{56}{14}$$

$$s = 4$$

Sumiko bought four shirts.

OBJ: Section 10.2

35. ANS:

$$x = 4$$

Verify:

$$LS = 2(4) + 3.5$$

$$= 11.5$$

$$RS = 11.5$$

$$LS = RS$$

OBJ: Section 10.2

36. ANS:

Answers may vary. Example: Frank spent a total of \$25 on five pairs of socks and a baseball cap. If the cap cost \$15, how much did each pair of socks cost?

OBJ: Section 10.2

37. ANS:

$$2w + 2(24) = 92$$

$$2w + 48 = 92$$

$$2w = 44$$

$$w = 22$$

Verify:

$$P = 2(l + w)$$

$$P = 2(24 + 22)$$

$$P = 2(46)$$

$$P = 92$$

Given perimeter = 92

Calculated perimeter = Given perimeter

The width of the garden is 22 m.

OBJ: Section 10.2

38. ANS:

$$\frac{x}{3} = 25$$

$$x = 75$$

Verify:

$$75 \div 3 = 25$$

Each person received \$25.

Calculated division = Given division

The sum is \$75.

OBJ: Section 10.1