Elementary Algebra
2nd Edition

Chapter 1 Practice Test

1. Into which set of numbers does - 6 fit?

   a) integer   b) whole number
   c) irrational   d) undefined

2. Into which set of numbers does $\sqrt{-25}$ fit?

   a) integer   b) whole number
   c) irrational   d) undefined

3. Evaluate - 14 + 19

   a) - 5   b) 5   c) - 33   d) 33

4. Evaluate 8 − 23

   a) - 15   b) 15   c) - 31   d) 31

5. Evaluate - 28 + 17

   a) - 42   b) 42   c) - 11   d) 11

6. Evaluate - 9 − 16

   a) - 25   b) 25   c) - 7   d) 7

7. Evaluate - 3 − (- 12)

   a) 9   b) - 9   c) - 15   d) 15

8. Evaluate and simplify $-\frac{1}{3} + \frac{5}{12}$

   a) $\frac{1}{12}$ b) $-\frac{1}{12}$ c) $\frac{1}{2}$ d) $-\frac{1}{2}$

9. Evaluate $\frac{1}{4} - \frac{7}{6}$

   a) $\frac{1}{4}$ b) $-\frac{1}{4}$ c) $\frac{11}{12}$ d) $-\frac{11}{12}$

10. Evaluate and simplify $\frac{-4}{-3} \cdot \frac{15}{8}$

    a) $\frac{11}{5}$ b) $-\frac{11}{5}$ c) $\frac{5}{2}$ d) $-\frac{5}{2}$

11. Evaluate and simplify $\frac{-4}{3} \div \frac{-8}{-6}$

    a) 1   b) - 1   c) $\frac{16}{9}$ d) $-\frac{16}{9}$

12. Find the solutions to the Factor Game with Key # = + 36 and the Sum # = - 13.

    a) - 9 and - 4   b) - 9 and + 4
    c) - 12 and + 3   d) - 12 and - 3

13. Find the solutions to the Factor Game with Key # = - 72 and the Sum # = + 14.

    a) + 17 and - 3   b) - 17 and + 3
    c) + 18 and - 4   d) - 18 and + 4

14. Find the solutions to the Factor Game with Key # = - 30 and the Sum # = - 13.

    a) - 10 and - 3   b) - 15 and + 2
    c) - 10 and + 3   d) - 15 and - 2

15. Evaluate the expression $(10)^1 + (-1)^4$.

    a) 6   b) 9   c) 14   d) 11

16. Evaluate the expression $(-2)^3 + (3)^2$.

    a) 17   b) -17   c) -1   d) 1

17. Evaluate the expression $-4^2 - 3^2$.

    a) -25   b) 25   c) 7   d) -7

18. Evaluate the expression $\sqrt{25} - \sqrt{9}$.

    a) 16   b) 4   c) 2   d) undefined

19. Evaluate the expression $\sqrt{16} - \sqrt{-9}$

    a) 7   b) 1   c) 5   d) undef.

20. Evaluate the expression $\dfrac{4 - 2 \cdot (-12)}{(-2)^2}$

    a) 7   b) -6   c) -5   d) 24

21. Evaluate the expression $|2 - 8| - |-9|$

    a) -3   b) 3   c) -15   d) 19

22. Evaluate the expression $y^2 - 5y$ when y is replaced by -3.

    a) 24   b) -6   c) -24   d) 6

23. Evaluate the expression $\dfrac{w - 10}{-3k}$ when **w** is replaced by 2 and **k** is replaced by -1.

    a) 2   b) -2   c) $-\dfrac{8}{3}$ d) 4

24. What is the coefficient of the second term in the expression $2x^5 - 3x^4 - \dfrac{5}{4}x + 12$

    a) 3   b) $3x^4$ c) -3   d) 4

25. Simplify $-8b^3 + 5b^3$.

    a) $-3b^3$ b) $-3b^6$ c) $3b^3$ d) $3b^6$

26. Simplify $-2h - (-9h)$.

    a) 7h   b) $7h^2$ c) $-11h^2$ d) -11h

27. Multiply $(-9x)(-x)$.

    a) -10x   b) $-10x^2$

    c) 9x   d) $9x^2$

28. Evaluate $m = \dfrac{y - w}{x - v}$ when $\begin{matrix} y = 3 & w = -5 \\ x = -4 & v = 8 \end{matrix}$

    a) $m = -\dfrac{3}{4}$ b) $m = -\dfrac{2}{3}$

    c) $m = \dfrac{1}{6}$ d) $m = -\dfrac{1}{2}$

29. Distribute to simplify $-6(-3x + 7)$

    a) $18x + 7$ b) $18x - 42$

    c) $-18x + 7$ d) $-18x - 42$

30. Distribute to simplify $-4y(y^3 - 7y)$

    a) $-4y^3 - 7y$ b) $-4y^4 - 7y$

    c) $-4y^4 + 28y^2$ d) $-4y^4 - 28y^2$

For #31 - 36, show all your work.

31. Evaluate $A = \frac{1}{2} \cdot h \cdot (b + B)$ when

    $h = 6$, $b = 5$ and $B = 8$

32. Evaluate $I = P \cdot r \cdot t$ when

    $P = 800$; $r = .12$ and $t = \frac{3}{4}$

33. Evaluate the expression $-24 \div 6 \cdot 2 - 4$

34. Evaluate the expression $\dfrac{-7 - 3^2}{(-2)^3}$

35. Micah put $2,000 in a short-term account that gained 9% interest. How much interest did the account gain after 4 months?

36. Find the solutions of the Factor Game with Key # = $+60$ and the Sum # = -19.

37. Write the expression $x^2 + 6$ in English.

38. Write the expression $(3 \cdot x)^2$ in English.

39. Write the algebraic form of "The difference of 5 and the product of a number and 9."

40. Write the algebraic form of "The square of the sum of a number and 6."

Answers

1.	a	6.	a	11.	b	16.	d	21.	a	26.	a
2.	d	7.	a	12.	a	17.	a	22.	a	27.	d
3.	b	8.	a	13.	c	18.	c	23.	c	28.	b
4.	a	9.	d	14.	b	19.	d	24.	c	29.	b
5.	c	10.	c	15.	d	20.	a	25.	a	30.	c

31.   39   32.   72   33.   - 12

34.   2   35.   60   36.   - 15 and - 4

37. $x^2 + 6$:   "The sum of the square of x and 6."

     or: "The sum of the square of *a number* and 6."

38. $(3 \cdot x)^2$ "The square of the product of 3 and x."

     or: "The square of the product of 3 and *a number*."

39. $5 - x \cdot 9$ or $5 - 9x$

40. $(x + 6)^2$