

COMPUTATION AND ELEMENTARY ALGEBRA PRETEST

1. Which of the following is equal to $-2(x-5)$?
 - A. $-2x+7$
 - B. $-2x-5$
 - C. $-2x+10$
 - D. $-2x-10$

2. 16 is what percent of 80?
 - A. 12.8%
 - B. 5%
 - C. 23%
 - D. 20%

3. Which of the following is the smallest number? 7, 0, -10, -3
 - A. -3
 - B. 0
 - C. -10
 - D. 7

4. If $x = -3$ then $4x^2 - 3x - 10 =$
 - A. 35.
 - B. 143.
 - C. 17.
 - D. -55.

5. What is 576 divided by 47? (Round the answer to three decimal places.)
 - A. 12.463
 - B. 13.642
 - C. 11.953
 - D. 12.255

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6. If $a = 4$ and $b = -3$ then $\frac{ab-4}{2b^2} =$

A. $\frac{-4}{9}$.

B. $\frac{4}{9}$.

C. $\frac{8}{9}$.

D. $\frac{-8}{9}$.

7. $8\sqrt{5} + 3\sqrt{5} - \sqrt{5} =$

A. 11.

B. $10\sqrt{5}$.

C. $11\sqrt{5}$.

D. $11\sqrt{10} - \sqrt{5}$.

8. Combine into a single expression: $\frac{3}{x} + \frac{4}{y}$.

A. $\frac{12}{xy}$

B. $\frac{7}{x+y}$

C. $\frac{3y+4x}{xy}$

D. $\frac{3y+4x}{x+y}$

9. After dining at a restaurant John received a bill for \$42.38. He wanted to leave a 20% tip for the waiter. What should he have paid?

A. \$ 8.48

B. \$50.86

C. \$51.67

D. \$49.34

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10. Which property of real numbers is demonstrated by the following statement?

$$3 + (2 + 5) = (2 + 5) + 3$$

- A. The associative property of addition
- B. The commutative property of addition
- C. The distributive property
- D. The identity property of addition

11. Write 12% as a fraction in lowest terms.

- A. $\frac{6}{50}$
- B. $\frac{1}{8}$
- C. $\frac{1}{5}$
- D. $\frac{3}{25}$

12. Which of the following is true of the two numbers $-\frac{1}{5}$ and .20?

- A. They are equal.
- B. The first is larger than the second.
- C. Their sum is 0.
- D. Their product is 1.

13. Which of the following is a factor of $x^3 + x^2 - 6x$?

- A. $x - 1$
- B. $x - 6$
- C. $x + 3$
- D. $x + 2$

14. Which is the scientific notation for 3,140,000?

- A. 3.14×10^6
- B. 3.14×10^{-6}
- C. $.314 \times 10^7$
- D. 3.14×10^{-6}

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15. The perimeter of a triangle is the sum of its sides. What is the perimeter of a triangle having sides of length $4\frac{1}{2}$ inches, $7\frac{3}{8}$ inches and $3\frac{1}{5}$ inches?

- A. 14.502 inches
- B. 15.075 inches
- C. 16.341 inches
- D. 15.224 inches

16. Which of the following is point on the graph of $y = 4x - 1$?

- A. $(-2, -7)$
- B. $(-1, -5)$
- C. $(3, 13)$
- D. $(2, 9)$

17. Which of the following is equal to $(x^2 - 2xy + y^2) - (2x^2 - 3xy + y^2)$?

- A. $-x^2 + xy$
- B. $3x^2 - 5xy + 2y^2$
- C. $-x^2 - 5xy$
- D. $-x^2 - 5xy + 2y^2$

18. Carrie has n nickels and d dimes. Which of the following represents the total amount of her money in cents?

- A. $5n + 10d$
- B. $15(n + d)$
- C. $15nd$
- D. $n + d$

19. Which of the following is the difference of two squares?

- A. $(2a - b) - (2a + b)$
- B. $(25x - 16y)$
- C. $4a^2 + b^2$
- D. $4m^2 - n^2$

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20. Factor: $3xy + 6x^2$.

- A. $3x(y + 2x^2)$
- B. $3x(y + 2x)$
- C. $3xy(1 + 6x^2)$
- D. $3x(y + x)$

21. 75 is approximately what percent of 70?

- A. 79
- B. 1.07
- C. 107
- D. 93

22. Multiply: $(3x + 2y)^2$.

- A. $9x + 4y$
- B. $25x^2y^2$
- C. $9x^2 + 6xy + 4y^2$
- D. $9x^2 + 12xy + 4y^2$

23. Multiply: $(5a + 4)(7a - 4)$.

- A. $12a$
- B. $35a^2 - 16$
- C. $35a^2 + 8a - 16$
- D. $35a^2 - 48a - 16$

24. In which quadrant would the graph of $(-5, -4)$ be found?

- A. Quadrant I
- B. Quadrant II
- C. Quadrant III
- D. Quadrant IV

25. Find a number that when added to -7 will yield 17.

- A. 10
- B. 24
- C. -10
- D. None of these.

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26. Which of the following is the x -intercept of the graph of $y = 8 - 2x$?

- A. $(0, -4)$
- B. $(4, 0)$
- C. $(0, -8)$
- D. $(8, 0)$

27. Simplify: $\frac{15}{16} \div \frac{7}{4}$.

- A. $\frac{15}{28}$
- B. $\frac{105}{64}$
- C. $\frac{43}{16}$
- D. $\frac{22}{16}$

28. Simplify: $x^5 \cdot x^{-1} \cdot x^0$.

- A. 1
- B. x^{-5}
- C. x^4
- D. x^6

29. Which of the following is greatest?

- A. $\frac{2}{3}$
- B. $\frac{5}{12}$
- C. $\frac{1}{2}$
- D. $\frac{3}{8}$

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30. Bill purchased a car and made a down payment of \$560. If the down payment was $\frac{1}{5}$ of the purchase price, what was the purchase price?

- A. \$112
- B. \$2,240
- C. \$2,800
- D. \$4,480

31. Of the following, which is closest to $\sqrt{4,000}$?

- A. 40
- B. 60
- C. 200
- D. 2,000

32. If $x = 4$ and $y = -2$, then $x^2y - xy^2 =$

- A. 48.
- B. 16.
- C. -16.
- D. -48.

33. If $2x + 3(x - 2) = 30$, then $x =$

- A. $\frac{5}{36}$.
- B. $\frac{24}{5}$.
- C. $\frac{32}{5}$.
- D. $\frac{36}{5}$.

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34. $\frac{5}{a} + \frac{7}{b} =$

A. $\frac{12}{a+b}$.

B. $\frac{12}{ab}$.

C. $\frac{5b+7a}{a+b}$.

D. $\frac{5b+7a}{ab}$.

35. $23.5 \times 3.04 =$

A. 714.4.

B. 79.9.

C. 71.44.

D. 7.99.

36. $\frac{3}{4} - \frac{1}{2} + \frac{2}{5} =$

A. $\frac{3}{20}$.

B. $\frac{4}{11}$.

C. $\frac{4}{7}$.

D. $\frac{13}{20}$.

37. One factor of $3a^2 - 13a - 10$ is

A. $(3a+2)$

B. $(3a-5)$

C. $(a+2)$

D. $(a+5)$

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38. If A represents the number of apples purchased at 15 cents each and B represents the number of bananas purchased at 10 cents each, which of the following represents the total purchase price in cents?

- A. $25AB$
- B. $25(A+B)$
- C. $15A+10B$
- D. $A+B$

39. Simplify: $\frac{3[7-2(5+4)]}{8-6\div 2}$.

- A. $\frac{-33}{5}$
- B. 135
- C. 27
- D. $\frac{15}{7}$

40. $\sqrt{18} + \sqrt{8} =$

- A. $\sqrt{26}$.
- B. $5\sqrt{2}$.
- C. 10.
- D. 12.