

Solution to Chapter 3 Form C. Correct answers are boxed.

1. Perform the operation. $-3(1 - 2x) = 6x - 3$

- a. $3 - 6x$ b. $-3 + 6x$ c. $-3 - 6x$ d. $3 + 6x$

2. Evaluate the expression. $-2x - 8$ for $x = -3$

- a. -2 b. 2 c. -14 d. 14

$$-2x - 8 = -2(-3) - 8 = 6 - 8 = -2$$

3. Solve the equation. $4x - 6x = -6$

- a. -3 b. $-\frac{3}{5}$ c. 3 d. $\frac{3}{5}$

$$4x - 6x = -6 \Rightarrow -2x = -6 \Rightarrow \frac{-2x}{-2} = \frac{-6}{-2} \Rightarrow x = 3$$

4. Simplify the expression. $-8x(-7y)$

- a. $-15xy$ b. $-56xy$ c. $56xy$ d. $15xy$

5. Translate the phrase to mathematical symbols. The sum of n and -12 .

- a. $-12n$ b. $n \div (-12)$ c. $12 - n$ d. $n + (-12)$

6. Simplify the expression. $4 - (-8m)$

- a. $-12m$ b. $12m$ c. $4 - 8m$ d. $4 + 8m$

7. Simplify the expression. $-5b - b$

- a. $5b^2$ b. $-6b$ c. $-5b$ d. $-6b^2$

8. Find the length of the rectangle with a perimeter of 48 feet and a width of 6 feet.

- a. 18 feet b. 36 feet c. 42 feet d. 21 feet

9. Solve the equation. $-16 = 4(x - 5)$

- a. 5 b. $-\frac{11}{4}$ c. -1 d. 1

$$-16 = 4(x - 5) \Rightarrow \frac{-16}{4} = \frac{4(x-5)}{4} \Rightarrow -4 = x - 5 \Rightarrow x = 1$$

10. Each school bus holds 42 children. Jackson High School has x buses. If each bus is filled to capacity, write an expression that represents the maximum number of students that can ride on the buses.

- a. $42 + x$ b. $42x$ c. $42 - x$ d. $42 \div x$

11. Simplify the expression. $9a - 7b - 5 - (-2a) - 4b - 12 = 11a - 11b - 17$

- a. $11a - 11b - 17$ b. $7a - 11b - 17$ c. $11a - 3b - 17$ d. $7a - 3b - 17$

12. Simplify the expression. $-(a - 5)$

- a. -16 b. $a + 5$ c. $-a - 5$ d. $-a + 5$

13. What is the coefficient of the first term of the expression? $-8y^3 - 5y^2 + 6y + 1$

- a. 3 **b. -8** c. -5 d. 2

14. How many terms are in the expression? $5y^4 - 3y^2 - 4$

- a. 2 **b. 3** c. 4 d. 5

15. Simplify the expression. $-2y - 2y - 2y$

- a. -6y** b. $-8y$ c. $6y$ d. $8y$

16. Solve the equation. $2x = 21 + 5x + 15$

- a. -108 b. 12 **c. -12** d. 108

$$2x = 21 + 5x + 15 \Rightarrow 2x - 2x = 21 + 5x - 2x + 15$$

$$\Rightarrow 0 = 36 + 3x \Rightarrow 3x = -36 \Rightarrow x = -12$$

17. Simplify the expression. $4z + (-6z)$

- a. $24z$ b. $-24z$ **c. -2z** d. $2z$

18. Solve the equation. $5(x + 8) = 0$

- a. 5 b. -5 **c. -8** d. 8

19. Simplify the expression. $7f - 4(1 - f)$

- a. $8f - 4$ b. $6f - 4$ c. $4f - 11$ **d. $11f - 4$**

20. Evaluate the expression. $\frac{x^2 - 4}{x}$ for $x = -4$

- a. -5 **b. -3** c. 3 d. 5

$$\frac{x^2 - 4}{x} = \frac{(-4)^2 - 4}{-4} = \frac{16 - 4}{-4} = \frac{12}{-4} = -3$$

21. Translate the phrase to mathematical symbols. The quotient of 8 and h .

- a. $\frac{8}{h}$** b. $8h$ c. $8 + h$ d. $8 - h$

22. Solve the equation. $7(2x - 1) = -7$

- a. -3 b. $\frac{1}{2}$ **c. 0** d. -1

23. What is the value of $p + 2$ twenty-dollar bills?

- a. $20(p + 2)$ dollars** b. $2(p + 20)$ dollars c. $2(p + 2)$ dollars d. $20p$ dollars

24. Simplify the expression. $0(-2x)$

- a. 0** b. $-x$ c. 1 d. $-2x$

25. Evaluate the expression. $-2xy - 8y$ for $x = -3$ and $y = 2$

a. 28 b. -28 c. -4 d. -2y

$$-2xy - 8y = -2(-3)2 - 8 \cdot 2 = 12 - 16 = -4$$