**Chapter 5 Mid-Chapter STUDY GUIDE**

**Evaluate each expression if *a* = 4, *b* = -6, and *c* = 3.**

 **1.** *b* − *c*

 **2.** *ac* + *b*

 **3.** $\frac{8(b + c)}{a}$

**Use the Distributive Property to evaluate each expression.**

 **4.** 5(8 + 2)

 **5.** −4(7 + *m*)

**Name the property shown by each statement (Commutative, Associative, Distributive, Identity).**

 **6.** 56 + (37 + 18) = (56 + 37) + 18

 **7.** 35 + *b* + 12 = *b* + 35 + 12

 **8.** *g* × 1 = *g*

 **9. JOGGING** Roberta jogs 4 laps the first day, 6 laps the second day, 8 laps the third day, and so on. On which day will Roberta jog 16 laps if the pattern continues? Hint: Make a table.

**Describe the relationship between the terms in each arithmetic sequence. Then write the next three terms in each sequence.**

**10.** 3, 11, 19, 27, …

**11.** 40, 44, 48, 52, …

**12.** 0.3, 0.9, 1.5, 2.1, …

**13.** 32, 44, 56, 68, …

 **1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

14**.** Which of the following describes the **relationship between the value of a term and *n***, its position in the sequence?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Position** | 1 | 2 | 3 | 4 | 5 | *n* |
| **Value of Term** | 4 | 8 | 12 | 16 | 20 |  |

 **A.** Add 3 to *n*.

 **B.** Subtract *n* from 3.

 **C.** Divide *n* by 4.

 **D.** Multiply *n* by 4.

15**.** Which of the following expressions can be written as 4(8 + *x*)?

 **A.** *x* • 4 + *x* • 8

 **B.** 8 + 4 • *x*

 **C.** 4 • 8 + *x*

 **D.** 4 • 8 + 4 • *x*

16. Sachi collects stamps. Each year, the number of stamps in her collection is five times *n*, the number’s position in the sequence. Which sequence represents Sachi’s number of stamps?

 **A.** 5, 15, 25, 35

 **B.** 5, 25, 125, 625

 **C.** 5, 10, 15, 20

 **D.** 5, 6, 7, 8

17. Name the property used for each letter below. Explain why you chose your answer.

 **A.** 7 + (3 + 5) = 7 + (5 + 3)

 **B.** 9 + (11 + 6) = (9 + 11) + 6

 **C.** 3(6 + 5) = 3 • 6 + 3 • 5

 **D.** 12(8 + 4) = 12(8) + 12(4)

18**.** Use this expression to name each vocabulary term: 14*m* – 5

19. **SHORT RESPONSE** Laura was paid **$4 per hour** for chores on Sunday, **$5 per hour** on Monday, and **$6 per hour** on Tuesday. Let ***s***represent the **number of hours** she worked on Sunday, ***m***represent the **number of hours** she worked on Monday, and ***t***represent the **number of hours** she worked on Tuesday. Write an expression that represents the total amount Laura was paid.

20. A) A web site charges $1.99 to download each game from the site. The web site also charges a $10.50 one-time membership fee. Write an expression that gives the total cost in dollars to download ***g*** games.

 B) Use your expression to find the cost of 4 games.

**14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**15. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**16. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**17. A. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**17. B. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**17. C. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**17. D. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**18. coefficient: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**constant: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**operation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**number of terms: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**19. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**20A. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**20B. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**