Chapter 1 Review

Multiple Choice
Identify the letter of the choice that best completes the statement or answers the question.

Evaluate the expression for the given value.

___ 1. \(2b + 3\) for \(b = 12\)
   a. 12  b. 21  c. 30  d. 27

___ 2. \(\frac{8c + 12}{c}\) for \(c = 3\)
   a. 40  b. 4  c. 24  d. 12

___ 3. \(c \cdot \frac{5a + b}{2}\) for \(a = 2, b = 6,\) and \(c = 6\)
   a. 33  b. 48  c. 14  d. 36

___ 4. \(3p + 2q - r\) for \(p = 4.5, q = 5.9,\) and \(r = 2.8\)
   a. 28.1  b. 22.5  c. 31.1  d. 20.2

___ 5. \(|5d|\) for \(d = 8\)
   a. -13  b. 13  c. 40  d. -40

___ 6. \(|a| + 2|b|\) for \(a = 3\) and \(b = 2\)
   a. 7  b. 1  c. -7  d. -1

___ 7. \(-a - 12\) for \(a = -8\)
   a. 4  b. -20  c. -4  d. 20

___ 8. \(x - y - z\) for \(x = 11, y = 5,\) and \(z = 9\)
   a. 25  b. -3  c. 7  d. 15

___ 9. \(cd - (d + c)\) for \(c = 3\) and \(d = -5\)
   a. -7  b. -23  c. -13  d. -17

___ 10. \((2r - s) + (-4)(r + s)\) for \(r = 1\) and \(s = -2\)
   a. 3  b. 6  c. 5  d. 1

Simplify the expression.

___ 11. \(40 + (-42)\)
   a. -2  b. 82  c. 2  d. -82

___ 12. \(37 - 45\)
   a. -82  b. 82  c. 8  d. -8

Simplify.

___ 13. \(3 - 15 \cdot 5\)
   a. 0  b. 78  c. 90  d. -72

___ 14. \(17 - 6 \cdot 10 + 2 + 12\)
   a. 27.8  b. 59  c. 67  d. -1
Name: ____________________________  ID: A

__ 15.  $5 \times (8 + 7) + 7$
   a.  83  b.  53  c.  54  d.  82

__ 16.  $[2 \cdot (10 + 5)] - 5$
   a.  12.5  b.  20  c.  25  d.  120

**Compare. Use >, <, or = to complete the statement.**

__ 17.  $7 \quad | -3 |$
   a.  >  b.  =  c.  <

__ 18.  $|10| \quad -6$
   a.  =  b.  <  c.  >

__ 19.  $| -10 | \quad | 11 |$
   a.  >  b.  =  c.  <

**Find the sum.**

__ 20.  $32 + 30$
   a.  55  b.  2  c.  67  d.  62

__ 21.  $-10 + 1 + (-6)$
   a.  -15  b.  -17  c.  -3  d.  5

__ 22.  $172 + (-167) + (-10) + (-144)$
   a.  -129  b.  -149  c.  185  d.  139

**Simplify the product.**

__ 23.  $4(-7)$
   a.  -28  b.  -30  c.  -26  d.  16

__ 24.  $-8(-9)$
   a.  74  b.  72  c.  71  d.  70

__ 25.  $-4 \cdot 10 \cdot 6$
   a.  -240  b.  -241  c.  -238  d.  -40

**Short Answer**

26.  Use grouping symbols to make the number sentence $7 - 2 \times 2 - 1 = 9$ true.

**Essay**

27.  Describe the steps you would follow in simplifying the expression $2 \cdot (7 - 4) + 6 \div 3 + (8 - 5)$. Then simplify the expression.

28.  Explain how to add integers with the same signs and with different signs.
Chapter 1 Review
Answer Section

MULTIPLE CHOICE

1. D  
2. D  
3. B  
4. B  
5. C  
6. A  
7. C  
8. B  
9. C  
10. D  
11. A  
12. D  
13. D  
14. D  
15. D  
16. C  
17. A  
18. C  
19. C  
20. D  
21. A  
22. B  
23. A  
24. B  
25. A

SHORT ANSWER

26. \((7 - 2) \times 2 - 1 = 9\)
ESSAY

27. [4] Answers include the order of operations:
1. Do the work inside the grouping symbols first.
2. Multiply and divide in order from left to right.
3. Add and subtract in order from left to right.
Expression simplified correctly to 11.

[3] Student describes the order of operations correctly and makes a computational error in simplifying the expression.

[2] Student does not describe the order of operations correctly but simplifies the expression correctly.

[1] Student does not describe the order of operations at all but simplifies correctly.

28. [4] Student answers should include
Integers with the same sign: The sum of two positive integers is positive. The sum of two negative integers is negative.
Integers with different signs: To add integers with different signs, find the difference of their absolute values. The sum has the sign of the integer with the greater absolute value.

[3] Student can explain how to add integers with the same sign but explanation for integers with different signs omits how to determine which sign the sum should have.

[2] Student can only explain how to add integers with the same sign.

[1] Student uses examples to explain how to add integers with the same and different signs but cannot write it in words.