**Ch 11 Integers Practice Test**

**True/False**

*Indicate whether the sentence or statement is true or false.*

*If false, write the corrected statement in the space provided.*

\_\_\_\_ 1. On a horizontal number line, the numbers increase to the left and decrease to the right.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_ 2. Opposite integers are any two integers with opposite signs.

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\_\_\_\_ 3. The addition statement modelled by the group of integer chips is (–5) + (+4).

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\_\_\_\_ 4. The integer sum represented by the group of chips is 6.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

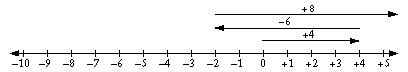
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\_\_\_\_ 5. The result of (+8) + (–4) is the same as the result of (–8) + (+4).

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\_\_\_\_ 6. The integer sum shown by the arrows above the number line is +6.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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\_\_\_\_ 7. The sum of a positive integer and a negative integer is always greater than zero.

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\_\_\_\_ 8. The sum of (+3) and (–8) is greater than the sum of (–5) and (+1).

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_ 9. When a positive integer is subtracted from a negative integer, the result is always a negative integer.

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\_\_\_\_ 10. When a negative integer is subtracted from a negative integer, the result can be zero.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_ 11. The difference of (–4) – (+5) is the opposite of the difference of (+4) – (–5).

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_ 12. The result of (–9) – (–7) + (–1) is –1.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Multiple Choice**

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

\_\_\_\_ 13. Which is the coldest temperature in this set of temperatures: 0ºC, 3ºC, 1ºC, or 10ºC?

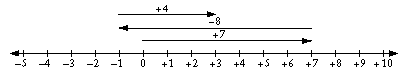
|  |  |  |  |
| --- | --- | --- | --- |
| a. | 0ºC | c. | 1ºC |
| b. | –3ºC | d. | 10ºC |

\_\_\_\_ 14. What is the addition statement for this group of integer chips?

****

|  |  |  |  |
| --- | --- | --- | --- |
| a. | (+10) + (–7) | c. | (–10) + (+7) |
| b. | (+10) + (+7) | d. | (–10) + (–7) |

\_\_\_\_ 15. What is the integer sum shown on the number line?

****

|  |  |  |  |
| --- | --- | --- | --- |
| a. | –8 | c. | +3 |
| b. | +7 | d. | +4 |

\_\_\_\_ 16. What is the result when a negative integer is added to a positive integer?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | an integer less than zero | c. | an integer equal to zero |
| b. | an integer greater than zero | d. | all of the above |

\_\_\_\_ 17. What is the subtraction sentence modelled by the sequence of integer chips?

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|  |  |  |  |
| --- | --- | --- | --- |
| a. | (+4) – (–6) | c. | (–4) – (+6) |
| b. | (–4) – (–6) | d. | (+4) – (+6) |

\_\_\_\_ 18. What is the result when a negative integer is subtracted from a negative integer?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | a negative integer | c. | zero |
| b. | a positive integer | d. | all of the above |

\_\_\_\_ 19. What is the difference of (–7) – (–2) – (–6)?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | +1 | c. | –11 |
| b. | +3 | d. | –15 |

\_\_\_\_ 20. What is the result of (–7) – (–2) + (–6)?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | –1 | c. | –11 |
| b. | –3 | d. | –15 |

\_\_\_\_ 21. The value of the expression (+5) + (–8) – (–12) + (–9) is

|  |  |  |  |
| --- | --- | --- | --- |
| a. | a positive integer. | c. | zero. |
| b. | a negative integer. | d. | not determined. |

\_\_\_\_ 22. What is the result of (–8) + (–8) – (–8) – (+8)?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 0 | c. | –24 |
| b. | –16 | d. | –32 |

**Matching**

*Choose the term that best matches each example listed below.*

|  |  |  |  |
| --- | --- | --- | --- |
| a. | integers | d. | opposite integers |
| b. | positive integers | e. | zero principle |
| c. | negative integers |

\_\_\_\_ 23. +1, +2

\_\_\_\_ 24. –1, –2

\_\_\_\_ 25. +1, –2

**Short Answer**

*Write your answer in the space provided.*

26. Draw a horizontal number line to show each set of integers. Represent each integer by a point. Write the integers in each set in increasing order.

a) –5, –1, –2, +4, +1

b) +3, –4, –1, +6, 0

c) –2, 0, +1, –4, +2

27. Write the opposite integer for each integer.

a) +12

b) +1

c) –100

d) –66

28. Write integers to represent each situation.

a) 15 min before the start of a movie, 45 min after the movie

b) 5 m taller, 1 m shorter

c) 13 cm underground, ground level

d) earning $10, $3 deducted for taxes

29. Interpret each group of integer chips. Write the addition statement for each.

a)

****

b)

****

c)

****

30. Write an addition statement for each situation, and solve.

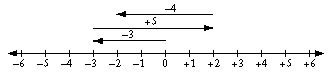
a) Maria jogged for 45 min and used up 400 calories. Later, she ate two slices of pizza and gained 700 calories.

b) Jeb got $25 on his birthday. He spent $17 on a new CD.

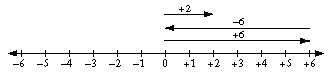
c) Hilary filled her water bottle with 750 mL of water. She drank 425 mL during lunch.

31. Write an addition statement for each number line.

a)

****

b)

****

32. Draw an integer number line to show each addition statement.

a) (–2) + (+1) + (–3)

b) (+7) + (–6) + (+5)

33. Use mental arithmetic to find each sum.

a) (–5) + (–4)

b) (+18) + (–8)

c) 0 + (–9)

34. What is the missing integer in each pattern?

a) +1, +3, +5, \_\_\_ , +9, ...

b) –5, 0, +5, \_\_\_ , +15, ...

c) 0, –3, –6, –9, \_\_\_ , ...

35. Solve.

a) (**–**2) **–** (**–**2)

b) 0 **–** (**–**1)

c) (+3) **–** (**–**6)

d) (**–**6) **–** (+3)

36. Determine the unknown integer.

a) (–8) – *x* = –1

b) (+10) – (+5) = *x*

c) *x* – (–2) = +10

d) (–4) – *x* = 0

37. Evaluate each expression.

a) (–18) + 56 – (–30)

b) (–10) – (–40) + 52

c) (–100) + 35 + 23 – 20

**Problem**

*Write your answer in the space provided.*

38. A high school basketball team has a record of three wins and two losses in its first five games. In the three winning games, the team outscored its opponents by 15 points, 10 points, and 9 points. In the two losing games, the team was outscored by 12 points and 8 points.

a) Write an integer addition statement for the team’s three wins. What is the total number of points by which the team outscored its opponents?

b) Write an integer addition statement for the team’s two losses. What is the total number of points by which the team was outscored?

c) Write an integer addition statement for the points scored and the points lost. What is the sum?

**Ch 11 Integers Practice Test**

**Answer Section**

**TRUE/FALSE**

1. ANS: F

On a horizontal number line, the numbers increase to the right and decrease to the left.

DIF: Level 3 REF: Knowledge/Understanding OBJ: Section 11.1

STO: NSN-7m1 TOP: Number Sense and Numeration KEY: Number Line

2. ANS: F

Opposite integers are two integers with the same numeral but opposite signs.

DIF: Level 3 REF: Knowledge/Understanding OBJ: Section 11.1

STO: NSN-7m1 TOP: Number Sense and Numeration KEY: Opposite Integers

3. ANS: F

The addition statement modelled by the group of integer chips is (+5) + (–4).

DIF: Level 2 REF: Application OBJ: Section 11.2 STO: NSN-7m21

TOP: Number Sense and Numeration KEY: Integer Addition

4. ANS: T DIF: Level 2 REF: Application OBJ: Section 11.2

STO: NSN-7m21 TOP: Number Sense and Numeration KEY: Integer Addition

5. ANS: F

The result of (+8) + (–4) is not the same as the result of (–8) + (+4).

Rationale:

(+8) + (–4) = +4

(–8) + (+4) = –4

DIF: Level 3 REF: Thinking/Inquiry/Problem Solving OBJ: Section 11.2

STO: NSN-7m1 TOP: Number Sense and Numeration KEY: Integer Addition

6. ANS: T DIF: Level 2 REF: Application OBJ: Section 11.3

STO: NSN-7m21 TOP: Number Sense and Numeration KEY: Integer Addition

7. ANS: F

The sum of a positive integer and a negative integer can be greater than or less than zero.

DIF: Level 2 REF: Thinking/Inquiry/Problem Solving OBJ: Section 11.3

STO: NSN-7m1 TOP: Number Sense and Numeration KEY: Integer Addition

8. ANS: F

The sum of (+3) and (–8) is less than the sum of (–5) and (+1).

Rationale:

(+3) + (–8) = –5

(–5) + (+1) = –4

DIF: Level 3 REF: Application OBJ: Section 11.3 STO: NSN-7m1

TOP: Number Sense and Numeration KEY: Comparing Integer Sums

9. ANS: T DIF: Level 3 REF: Knowledge/Understanding

OBJ: Section 11.4 STO: NSN-7m1 TOP: Number Sense and Numeration

KEY: Integer Subtraction

10. ANS: T DIF: Level 3 REF: Thinking/Inquiry/Problem Solving

OBJ: Section 11.4 STO: NSN-7m1 TOP: Number Sense and Numeration

KEY: Integer Subtraction

11. ANS: T DIF: Level 3 REF: Thinking/Inquiry/Problem Solving

OBJ: Section 11.4 STO: NSN-7m1 TOP: Number Sense and Numeration

KEY: Integer Subtraction, Opposite Integers

12. ANS: F

The result of (–9) – (–7) + (–1) is –3.

DIF: Level 3 REF: Application OBJ: Section 11.6 STO: NSN-7m22

TOP: Number Sense and Numeration KEY: Integer Addition/Subtraction

**MULTIPLE CHOICE**

13. ANS: B DIF: Level 2 REF: Thinking/Inquiry/Problem Solving

OBJ: Section 11.1 STO: NSN-7m1 TOP: Number Sense and Numeration

KEY: Comparing Integers

14. ANS: A DIF: Level 2 REF: Application OBJ: Section 11.2

STO: NSN-7m21 TOP: Number Sense and Numeration KEY: Integer Addition

15. ANS: C DIF: Level 2 REF: Application OBJ: Section 11.3

STO: NSN-7m21 TOP: Number Sense and Numeration KEY: Integer Addition

16. ANS: D DIF: Level 3 REF: Thinking/Inquiry/Problem Solving

OBJ: Section 11.3 STO: NSN-7m22 TOP: Number Sense and Numeration

KEY: Integer Addition

17. ANS: B DIF: Level 3 REF: Application OBJ: Section 11.4

STO: NSN-7m21 TOP: Number Sense and Numeration KEY: Integer Subtraction

18. ANS: D DIF: Level 4 REF: Thinking/Inquiry/Problem Solving

OBJ: Section 11.4 STO: NSN-7m1 TOP: Number Sense and Numeration

KEY: Integer Subtraction

19. ANS: A DIF: Level 3 REF: Application OBJ: Section 11.5

STO: NSN-7m22 TOP: Number Sense and Numeration KEY: Integer Subtraction

20. ANS: C DIF: Level 3 REF: Application OBJ: Section 11.6

STO: NSN-7m22 TOP: Number Sense and Numeration KEY: Integer Addition/Subtraction

21. ANS: C DIF: Level 3 REF: Application OBJ: Section 11.6

STO: NSN-7m22 TOP: Number Sense and Numeration KEY: Integer Addition/Subtraction

22. ANS: B DIF: Level 3 REF: Application OBJ: Section 11.6

STO: NSN-7m22 TOP: Number Sense and Numeration KEY: Integer Addition/Subtraction

**MATCHING**

23. ANS: B DIF: Level 2 REF: Knowledge/Understanding

OBJ: Section 11.3 STO: NSN-7m1 TOP: Number Sense and Numeration

KEY: Integer

24. ANS: C DIF: Level 2 REF: Knowledge/Understanding

OBJ: Section 11.3 STO: NSN-7m1 TOP: Number Sense and Numeration

KEY: Integer

25. ANS: A DIF: Level 2 REF: Knowledge/Understanding

OBJ: Section 11.3 STO: NSN-7m1 TOP: Number Sense and Numeration

KEY: Integer

**SHORT ANSWER**

26. ANS:

**a)**

****

From smallest to greatest, the integers are in this order: –5, –2, –1, +1, +4.

**b)**

****

From smallest to greatest, the integers are in this order: –4, –1, 0, +3, +6.

**c)**

****

From smallest to greatest, the integers are in this order: –4, –2, 0, +1, +2.

DIF: Level 1 REF: Application OBJ: Section 11.1 STO: NSN-7m1

TOP: Number Sense and Numeration KEY: Number Line

27. ANS:

a) –12

b) –1

c) +100

d) +66

DIF: Level 2 REF: Knowledge/Understanding OBJ: Section 11.1

STO: NSN-7m1 TOP: Number Sense and Numeration KEY: Opposite Integers

28. ANS:

a) –15, +45

b) +5, –1

c) –13, 0

d) +10, –3

DIF: Level 2 REF: Thinking/Inquiry/Problem Solving OBJ: Section 11.1

STO: NSN-7m1 TOP: Number Sense and Numeration KEY: Comparing Integers

29. ANS:

a) (+5) + (–3)

b) (+1) + (–4)

c) (+3) + (–3)

DIF: Level 2 REF: Application OBJ: Section 11.2 STO: NSN-7m21

TOP: Number Sense and Numeration KEY: Integer Addition

30. ANS:

a) (–400) + (+700) = +300

Maria gained +300 calories.

b) (+25) + (–17) = +8

Jeb had $8 left.

c) (+750) + (–425) = +325

There is 325 mL of water in Hilary’s water bottle.

DIF: Level 3 REF: Application OBJ: Section 11.2 STO: NSN-7m22

TOP: Number Sense and Numeration KEY: Integer Addition

31. ANS:

a) (3)  (5)  (4)

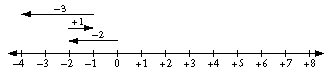
b) (6)  (6)  (2)

DIF: Level 3 REF: Application OBJ: Section 11.3 STO: NSN-7m21

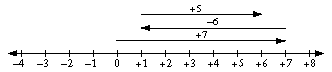
TOP: Number Sense and Numeration KEY: Integer Addition

32. ANS:

a)

****

b)

****

DIF: Level 3 REF: Application OBJ: Section 11.3 STO: NSN-7m22

TOP: Number Sense and Numeration KEY: Integer Addition

33. ANS:

a) –9

b) +10

c) –9

DIF: Level 3 REF: Application OBJ: Section 11.3 STO: NSN-7m22

TOP: Number Sense and Numeration KEY: Integer Addition

34. ANS:

a) +7

b) +10

c) –12

DIF: Level 2 REF: Thinking/Inquiry/Problem Solving OBJ: Section 11.3

STO: NSN-7m1 TOP: Number Sense and Numeration KEY: Comparing Integers

35. ANS:

a) 0

b) +1

c) +9

d) **–**9

DIF: Level 2 REF: Application OBJ: Section 11.4 STO: NSN-7m22

TOP: Number Sense and Numeration KEY: Integer Subtraction

36. ANS:

a) *x* = (–7)

b) *x* = (+5)

c) *x* = (+8)

d) *x* = (-4)

DIF: Level 3 REF: Application OBJ: Section 11.5 STO: NSN-7m22

TOP: Number Sense and Numeration KEY: Integer Subtraction

37. ANS:

a) +68

b) +82

c) –62

DIF: Level 3 REF: Application OBJ: Section 11.6 STO: NSN-7m22

TOP: Number Sense and Numeration KEY: Integer Addition/Subtraction

**PROBLEM**

38. ANS:

a) (+15) + (+10) + (+9) = +34

b) (–12) + (–8) = 20

c) (+34) + (–20) = +14

DIF: Level 2 REF: Thinking/Inquiry/Problem Solving OBJ: Section 11.2

STO: NSN-7m22 TOP: Number Sense and Numeration KEY: Integer Addition