

Chapter Review

ISG Interactive Study Guide

See pages 43–46 for:

- Vocabulary Check
- Key Concept Check
- Problem Solving
- Reflect

Lesson-by-Lesson Review

Lesson 2-1 Integers and Absolute Value (pp. 46–51)

Write two inequalities using the number pairs. Use the symbols $<$ or $>$.

1. -20 and -18
2. 0 and -5

Replace each \bullet with $<$, $>$, or $=$ to make a true sentence.

3. $5 \bullet -5$
4. $7 \bullet 7$
5. $-3 \bullet 1$
6. $-14 \bullet -22$

Evaluate each expression.

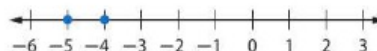
7. $|-16| = 16$
8. $|4| = 4$
9. $|-34| = 34$
10. $|-2| + |-11|$

11. Jamal traded away 7 shortstop cards for 5 pitcher cards. Find an integer that represents the change in the number of cards Jamal had after the trade.

-2

Example 1

Write two inequalities comparing -5 and -4 . Use the symbols $<$ or $>$.

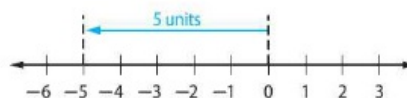


Since -4 is to the right of -5 , $-4 > -5$.

Since -5 is to the left of -4 , $-5 < -4$.

Example 2

Evaluate $|-5|$.



The graph of -5 is 5 units from 0.

So, $|-5| = 5$.

Lesson 2-2 Adding Integers (pp. 55–60)

Find each sum.

12. $-5 + (-1)$
13. $-3 + (-7)$
14. $-6 + 10$
15. $4 + (-9)$
16. $7 + (-2)$
17. $14 + (-5)$
18. $-12 + 5 + (-6)$
19. $2 + 8 + (-3)$
20. $-4 + 9 + (-2)$
21. $-7 + 5 + (-4)$

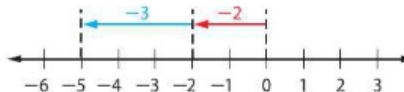
22. A contestant on a quiz game show has -25 points. If she loses an additional 50 points, what is her score? Write an addition equation and then solve.

23. A golfer's scores for the last five weeks are -3 , $+5$, -1 , -2 , and $+4$. What is the sum of his scores?

Example 3

Find $-2 + (-3)$.

Use a number line.



Start at zero. Move 2 units to the left. From there, move 3 more units to the left.

So, $-2 + (-3) = -5$.

Example 4

Find $9 + (-4)$.

$9 + (-4) = 5$ Subtract $|-4|$ from $|9|$.
The sum is positive.

Lesson 2-3 Subtracting Integers (pp. 63–67)

Find each difference.

24. $13 - 7$ 25. $-2 - 5$
 26. $8 - (-3)$ 27. $-1 - (-4)$
 28. $-4 - 6$ 29. $3 - 5$
 30. $7 - (-7)$ 31. $-4 - 10$ —
 32. $-5 - (-9)$ 33. $13 - 3$
 34. $-12 - (-3)$ — 35. $-9 - (-9)$

36. The table shows the highest and lowest elevations for North America. Find the difference between the highest and lowest elevations.

Lowest Elevation (feet)	Highest Elevation (feet)
-282	20,320

37. On Mars, the temperature ranges from 68°F during the day to -220°F at night. What is the difference in temperature between day and night?

Example 5Find $-13 - 4$.

$$-13 - 4 = -13 + (-4) \quad \text{To subtract 4, add } -4.$$

$$= -17$$

So, $-13 - 4 = -17$.**Example 6**Find $10 - (-2)$.

$$10 - (-2) = 10 + 2 \quad \text{To subtract } -2, \text{ add } 2.$$

$$= 12$$

So, $10 - (-2) = 12$.**Lesson 2-4 Multiplying Integers** (pp. 71–76)

Find each product.

38. $-2 \cdot 3$ 39. $-5 \cdot 6$
 40. $-7 \cdot (-9)$ 41. $-12 \cdot (-4)$
 42. $11(-7)$ 43. $-10(14)$
 44. $5(-2)(-6)$ 45. $-7(4)(3)$
 46. $10(-4)(9)$ 47. $-3(-2)(-8)$
 48. $9(-8)(1)$ 49. $-10(-2)(3) = 20(3) = 60$
 50. $4(-7)(-3)$ 51. $-12(-12)(-2)$

52. A scuba diver starts at the surface and descends at a rate of 25 feet per minute. Write and evaluate a multiplication expression to find the depth of the scuba diver after 6 minutes.

53. For each jump she completes incorrectly in an ice-skating competition, Dawn receives -2 points. If Dawn completes six jumps incorrectly and no jumps correctly, what is her score?

54. A helicopter descends at a rate of 450 feet per minute. Write and evaluate a multiplication expression to find the change in altitude of the helicopter after 5 minutes.

Example 7Find $3(-7)$.

$$3(-7) = -21$$

The factors have different signs.
The product is negative.

Example 8Find $-5(-4)$.

$$-5(-4) = 20$$

The factors have the same sign.
The product is positive.

Lesson 2-5 Dividing Integers (pp. 77–82)

Find each quotient.

55. $-16 \div (-4)$

56. $-56 \div (-8)$

57. $\frac{-30}{5}$

58. $15 \div (-3)$

59. $-88 \div -11$

60. $\frac{170}{-10}$

61. $18 \div (-9)$

62. $-144 \div (-12)$

63. $\frac{-720}{9}$

64. $350 \div (-70)$

65. For the first five legs of a bicycle race, Elena was 32 seconds, 5 seconds, 10 seconds, 8 seconds, and 12 seconds behind the leader. What was the average time she was behind the leader?

66. Yesterday's high temperature in Death Valley was 114°F . What was the temperature in degrees Celsius? Use the expression $\frac{5(F-32)}{9}$ to convert degrees Fahrenheit to degrees Celsius. Round to the nearest integer.

Example 9

Find $-24 \div (-6)$.

$-24 \div (-6) = 4$ The quotient is positive.

Example 10

Find $15 \div (-3)$.

$15 \div (-3) = -5$ The quotient is negative.

$\rightarrow \frac{32+5+10+8+12}{5} = \frac{67}{5} = 13.4$ SECONDS
AVERAGE BEHIND THE LEADERSHIP

M
M O D E
S
T

Lesson 2-6 Graphing in Four Quadrants (pp. 83–87)

Graph and label each point on a coordinate plane. Name the quadrant in which each point is located.

67. $P(7, -12)$

68. $Q(6, 9)$

69. $R(-10, 10)$

70. $S(-8, -9)$

71. $T(4, -5)$

72. $V(0, -1)$

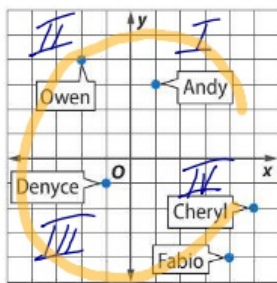
73. $X(5, 2)$

74. $Y(-3, 3)$

75. $W(2, 0)$

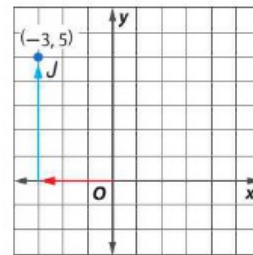
76. $Z(-1, -4)$

77. The coordinate plane shown represents the position of players' pieces in a board game. Name the quadrant in which each player's game piece is located.



Example 11

Graph and label point $J(-3, 5)$ on a coordinate plane. Name the quadrant in which the point is located.



Point $J(-3, 5)$ is in Quadrant II.

COORDINATE

