Answers

Chapter 1

1.1 Start Thinking!
For use before Activity 1.1

Sample answer: In football, there is an order to the game. For example, one team must kick-off before the other team can begin their drive, they must score a touchdown before kicking the extra point. In math problems, there is the order of operations. Students must first multiply or divide before doing addition and subtraction.

1.1 Warm Up
For use before Activity 1.1

1. $<$ **2.** $>$ **3.** $>$

4. $<$ **5.** $>$ **6.** $<$

1.1 Start Thinking!
For use before Lesson 1.1

Sample answer: Going to school is like moving the positive direction on a number line. Returning home after school is like moving the negative direction on a number line. No, you never travel a negative direction.

1.1 Warm Up
For use before Lesson 1.1

1. 15   **2.** 23   **3.** 7   **4.** 35

5. 43   **6.** 0   **7.** 39   **8.** 212

1.1 Practice A

1. 7   **2.** 12   **3.** 13   **4.** 0

5. $>$ **6.** $=$ **7.** $>$ **8.** $-5, 3$

9. $-1, \left|-1\right|, \left|4\right|, \left|5\right|, 8$ **10.** $0, \left|2\right|, \left|3\right|, \left|5\right|, 6$

11. 19   **12.** -8 **13.** -13

14. a. 2   **b.** 2 ft per sec   **c.** positive   **d.** 2 ft per sec

15. a. LATE   **b.** TEAL   **16.** *Sample answer:* -5

1.1 Practice B

1. $=$ **2.** $<$ **3.** $<$ **4.** $15, -6$

5. $-\left|-34\right|, \left|0\right|, 14, \left|-25\right|, 28$

6. $-16, 10, \left|-16\right|, \left|25\right|, \left|-43\right|$

7. 249   **8.** -183 **9.** -153

10. a. Phosphorus   **b.** Oxygen

11. a. up   **b.** 13 ft/sec   **c.** down   **d.** 17 ft/sec

12. 0

13. true; Both numbers have an absolute value of 3.

14. false; *Sample answer:* Let $x = -4.$ Then $\left|x\right| = 4$ and 4 is not less than $-4.$

1.1 Enrichment and Extension

1. always   **2.** never   **3.** sometimes

4. sometimes   **5.** never   **6.** always

7. sometimes   **8.** sometimes

9. all negative integers   **10.** all positive integers

11. none   **12.** all integers   **13.** none

14. all integers   **15.** all integers   **16.** none

17. all integers   **18.** none

19. all negative integers and zero

20. all negative integers and zero

21. all positive integers and zero

22. all positive integers and zero

23. all positive integers and zero

24. all negative integers and zero

25. none   **26.** all negative integers

27. all positive integers   **28.** all positive integers

29. none   **30.** all integers

31. all positive integers   **32.** all integers

33. none   **34.** all integers

35. all integers   **36.** all integers

Check students' picture; It should be a dog.

1.1 Puzzle Time

A TENNIS BALL

1.2 Start Thinking!
For use before Activity 1.2

Sample answer: In golf, the goal is to get below par. This would represent zero. Scores above a par on a hole would be positive integers and scores below par on a hole would be negative integers.

1.2 Warm Up
For use before Activity 1.2

1. 22   **2.** 42   **3.** 77

4. 150   **5.** 122   **6.** 221

Answers

For use before Lesson 1.2

less than; *Sample answer:* The starting temperature increases $(\text{add } +10)$ 10 degrees, then decreases $(\text{add } -12)$ 12 degrees.

1.2 Warm Up
For use before Lesson 1.2

1. 13　　　　**2.** -6　　　　**3.** 5

4. 4　　　　**5.** -4　　　　**6.** 0

1.2 Practice A

1. 10　　**2.** -8　　**3.** -12　　**4.** 0

5. 0　　**6.** 3　　**7.** 3　　**8.** -6

9. -17　　**10.** -17　　**11.** -7　　**12.** -3

13. $29

14. Use the Commutative Property to switch the positions of the terms -5 and -8. Then use the Associative Property to group the terms 8 and -8. Because they are opposites, their sum will be zero; -5

15. Use the Commutative Property to switch the positions of the terms 4 and 9. Then use the Associative Property to group the terms -4 and 4. Because they are opposites, their sum will be zero; 9

16. Use the Commutative Property to switch the positions of the terms 12 and -7. Then use the Associative Property to group the terms -5 and -7. The sum of -5 and -7 is -12, which is the opposite of 12; 0

17. 10　　**18.** -9　　**19.** 11

20. 4　　**21.** -7　　**22.** -3

23. -18　　**24.** 15　　**25.** -27

26. $n = 13$　　**27.** $c = -4$　　**28.** $k = -8$

29. $2 + (-1) + (-2)$

30.

3	-1	-2
-4	4	0
1	-3	2

1.2 Practice B

1. 39　　　　**2.** -48　　　　**3.** 0

4. -41　　　　**5.** 5

6. Use the Commutative Property to switch the positions of the terms -25 and -18. Then use the Associative Property to group the terms 18 and -18. Because they are opposites, their sum will be zero; -25

7. Use the Commutative Property to switch the positions of the terms 45 and -8. Then use the Associative Property to group the terms -22 and -8; 15

8. Use the Commutative Property to switch the positions of the terms -12 and 4. Then use the Associative Property to group the terms 28 and 4; 20

9. -28　　**10.** 3　　**11.** -27

12. 56　　**13.** 18　　**14.** -79

15. 37　　**16.** 14　　**17.** -59

18. $n = 25$　　**19.** $c = 71$　　**20.** $k = -80$

21. *Sample answer:* $-30, 8, 2$ and $8, 7, -5$

22. $-10°F$

23. *Sample answer:*

9	-6	-3
-1	0	1
-8	6	2

1.2 Enrichment and Extension

1.

-8	-3	-4
-1	-5	-9
-6	-7	-2

2.

-2	3	-4
-3	-1	1
2	-5	0

3.

-7	7	6	-4
4	-2	-1	1
0	2	3	-3
5	-5	-6	8

Answers

4.

−4	1	−10	3
−9	2	−3	0
5	−8	−1	−6
−2	−5	4	−7

5. Check students' work.

1.2 Puzzle Time

IN CASE HE GOT A HOLE IN ONE

1.3 Start Thinking!
For use before Activity 1.3

Sample answer: You could find the distance from where you are starting to where you are going. You could find the change in elevation.

1.3 Warm Up
For use before Activity 1.3

1. 34   **2.** 64   **3.** 77

4. 7   **5.** 45   **6.** 2

1.3 Start Thinking!
For use before Lesson 1.3

Sample answer: Rewrite the problem as an addition problem (add the opposite), then use additional rules. Do this for all 3 questions.

1.3 Warm Up
For use before Lesson 1.3

1. −3   **2.** 15   **3.** 1

4. −10   **5.** −7   **6.** −17

1.3 Practice A

1. −5   **2.** 9   **3.** −10   **4.** −3

5. 19   **6.** 8   **7.** −22   **8.** 8

9. 2   **10.** 22   **11.** 30   **12.** −45

13. −13   **14.** $7 + (-3)$ **15.** $5 - 3$

16. 2   **17.** 13   **18.** −4   **19.** 14

20. −1   **21.** 0   **22.** −18   **23.** 19

24. 26   **25.** 10   **26.** −11   **27.** −4

28. *Sample answer:* $x = -1$, $y = -3$; $x = -4$, $y = -6$

29. a. 367 ft   **b.** 33 ft   **c.** New Orleans

1.3 Practice B

1. −5   **2.** 29   **3.** −49   **4.** −15

5. 191   **6.** −146   **7.** −12   **8.** 18

9. $8 - (-28)$ **10.** 9

11. 17   **12.** 13   **13.** 134   **14.** −48

15. −44   **16.** −25   **17.** 103   **18.** 206

19. 71   **20.** 17   **21.** 23   **22.** 7

23. −38   **24.** −53

25. a. 94, 103, 114, 107, 84, 76, 64, 65, 75, 86, 105, 98
    b. high of 99, low of −46   **c.** 145

26. For $|b| > |a|$ or a and b have different signs.

1.3 Enrichment and Extension

1. highest: 14; first dart: 7; second dart: −7

2. lowest: −14; first dart: −7; second dart: 7

3.

First Dart	7	6	5	4	3	2
Second Dart	3	2	1	0	−1	−2

First Dart	1	0	−1	−2	−3
Second Dart	−3	−4	−5	−6	−7

4.

First Dart	1	0	−1	−2	−3
Second Dart	7	6	5	4	3

First Dart	−4	−5	−6	−7
Second Dart	2	1	0	−1

5. There are 15 ways to get a score of 0. There is 1 way to get a score of 14. There is 1 way to get a score of −14.

6. You should try to land on a negative integer first and a positive integer second. Subtracting a positive integer is the same as adding a negative integer, which gives you a lower score.