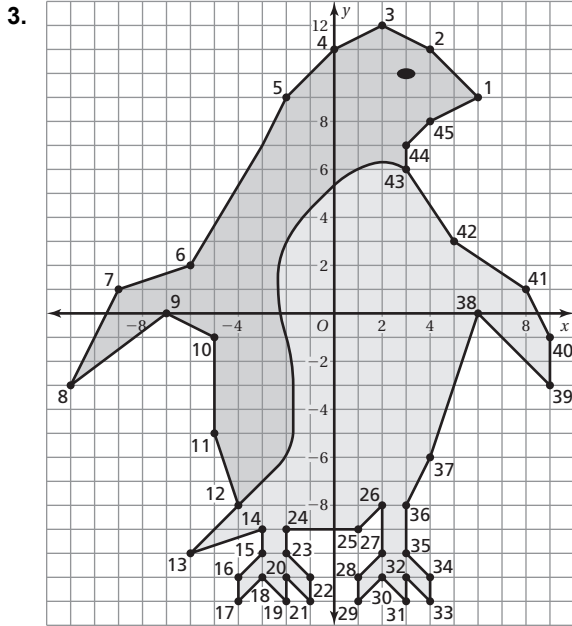


Student Workbook Answers



The picture is a penguin.

4. *Sample answer:* The first coordinate tells you how far to travel from the origin along the horizontal axis and in what direction. When it is positive, move right. When it is negative, move left. The second coordinate tells you how far to travel along the vertical axis and in what direction. When it is positive, move up. When it is negative, move down.

5. *Answer should include, but is not limited to:* Dot-to-dot picture in coordinate plane using at least 20 points, 2 points in each quadrant

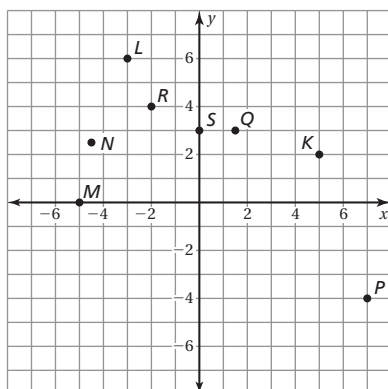
1.4 Practice

1. $A(2, 3)$ 2. $B(0, -4)$ 3. $C(1, -3)$ 4. $D(4, 1)$

5. $E(1, 0)$ 6. $F(-3, -2)$ 7. $G(-4, 3)$

8. $H(2, -4)$ 9. $I(-2, -4)$ 10. $J(-1, 1)$

Graph for 11–18.



11. Quadrant I 12. Quadrant II 13. x-axis

14. Quadrant II 15. Quadrant IV 16. Quadrant I

17. Quadrant II 18. y-axis

19. To plot $(3, -4)$, start at $(0, 0)$ and move 3 units right and 4 units down.

20. always 21. always 22. sometimes

23. a. $(2, -1)$ b. $(-4, 3)$ c. school

d. walk 6 blocks west and 4 blocks north

e. yes; No matter in which direction you move 2 blocks from the mall, you are still in Quadrant II.

Chapter 2

Fair Game Review

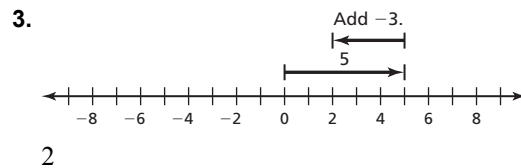
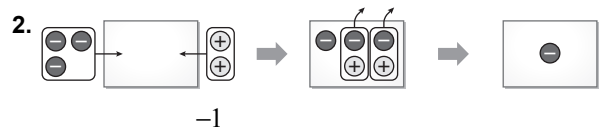
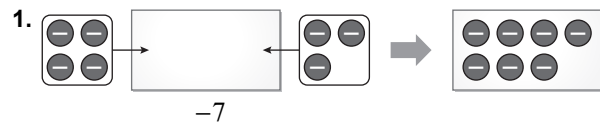
1. 25 2. 32 3. 45

4. 600 5. 220 6. 1700

7. 0 8. 0 9. 14

10. 20 11. 17 12. 16

2.1 Activity



4. $7 + (-7)$; 0; 7 and -7 are the same distance from 0 on a number line.

5. Integers with the same sign; -7 ; negative

6. Integers with different signs; -1 ; negative

7. Integers with different signs; 2; positive

8. Integers with different signs; 0; zero

9. Integers with the same sign; 6; positive

Student Workbook Answers

10. Integers with the same sign; -8 ; negative
11. Integers with different signs; 4 ; positive
12. Integers with different signs; 6 ; positive
13. Integers with different signs; 0 ; zero
14. Integers with the same sign; -12 ; negative
15. Integers with different signs; 0 ; zero
16. *Sample answer:* It depends upon the specific numbers involved. The sum will have the same sign as the integer with the greater absolute value.
17. a. *Sample answer:* To add two positive integers, add normally. To add two negative integers, ignore the signs and add the two numbers, then make the answer negative.
- b. *Sample answer:* Subtract the lesser absolute value from the greater absolute value. Use a negative sign if the negative integer had the greater absolute value.
- c. The sum is zero.

2.1 Practice

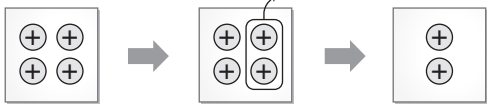
1. 10 2. -8 3. -12 4. 0
5. 0 6. 3 7. 3 8. -6
9. -17 10. -17 11. -7 12. -3
13. $\$29$
14. Use the Commutative Property to switch the positions of the terms -5 and -8 . Then use the Associative Property to group the terms 8 and -8 . Because they are opposites, their sum will be zero; -5
15. Use the Commutative 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

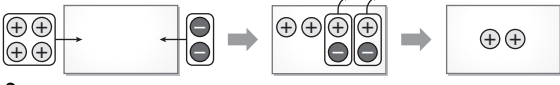
23. -18 24. 15 25. -27
26. $n = 13$ 27. $c = -4$ 28. $k = -8$
29. $2 + (-1) + (-2)$

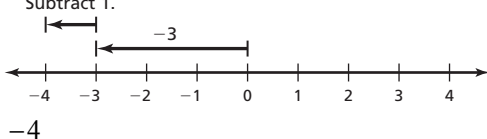
30.

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

2.2 Activity

1. 

2. 

3. Subtract 1. 

4. $-3 + (-1) = -4$ 5. Subtract 2; 2
6. Add -2 ; 2 7. Subtract 1; -4
8. Add -1 ; -4 9. Subtract 8; -5
10. Add -8 ; -5 11. Subtract 13; -4
12. Add -13 ; -4 13. Subtract -3 ; -3
14. Add 3 ; -3 15. Subtract -12 ; 7
16. Add 12 ; 7
17. Subtracting an integer is the same as adding its opposite.
18. To subtract an integer, add its opposite.
19. -9 ; Additive Inverse Property; *Sample answer:* $-4 + 4 = 0$, so you know your answer is the remaining number, -9 .

2.2 Practice

1. -5 2. 9 3. -10 4. -3
5. 19 6. 8 7. -22 8. 8
9. 2 10. 22 11. 30 12. -45

Student Workbook Answers

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

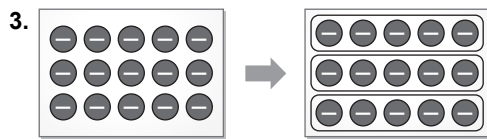
28. *Sample answer:* $x = -1$, $y = -3$; $x = -4$, $y = -6$

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

2.3 Activity

1. $3 \cdot (-2) = (-2) + (-2) + (-2) = -6$

2. The products increase by 3 in each row. -9 ; -6 ; -3 ; 0 ; 3 ; 6



5; -5

4. -4 , 3 ; 3 , -4 . negative, negative, positive, negative, positive, negative.

5. Integers with the same sign; 18 ; positive

6. Integers with different signs; -10 ; negative

7. Integers with different signs; -30 ; negative

8. Integers with the same sign; 15 ; positive

9. Integers with different signs; 0 ; zero

10. Integers with different signs; -3 ; negative

11. Integers with the same signs; 3 ; positive

12. Integers with different signs; -5 ; negative

13. Integers with different signs; -2 ; negative

14. Integers with different signs; 0 ; zero

15. It can be positive, negative, or zero.

If one integer is negative, then the product is negative.

If both integers have the same sign, the product is positive.

If one integer is 0, then the product is 0.

16. a. Multiply the absolute values and make the product positive.

b. Multiply the absolute values and make the product negative.

2.3 Practice

1. -12 2. -30 3. 16 4. 54

5. 0 6. 36 7. -2 8. 5

9. -2 10. 0 11. -5 12. -3

13. -35 14. -30 15. -20 16. -42

17. 1 18. -5 19. 96 ; -192

20. 729 ; $-2,187$

21. a. -12

b. -36 ; -72 ; -108

c. 15 seconds; Divide 180 by 12 to get 15.

d. 48 feet

2.4 Activity

1. 5 ; 25 ; 125 ; 625 ; 780

2.

Repeated Factors	Using an Exponent	Value
a. 4×4	4^2	16
b. 6×6	6^2	36
c. $10 \times 10 \times 10$	10^3	1000
d. $100 \times 100 \times 100$	100^3	1,000,000
e. $3 \times 3 \times 3 \times 3$	3^4	81
f. $4 \times 4 \times 4 \times 4 \times 4$	4^5	1024
g. $2 \times 2 \times 2 \times 2 \times 2 \times 2$	2^6	64

h. *Sample answer:* 3 is the base number, or the number being multiplied. 5 is the exponent and determines how many times the base number is used as a factor.

3. a–d. *Answer should include, but is not limited to:* Students should write their own “St. Ives” poems with illustrations. Students should then answer the question in their poems and show how exponents are used in their answers.

Student Workbook Answers

4. *Sample answer:* Real-life situations use repeated factors when something is multiplied by the same amount each time. For example: An earring design has 3 beads at the top. Each bead has 3 more beads below it. The number of beads in an earring is $3 \times 3 = 3^2 = 9$.

5.

10	100	1000	10,000	100,000	1,000,000
10^1	10^2	10^3	10^4	10^5	10^6

The exponent is the same as the number of zeros in the number.

2.4 Practice

1. 6^2 2. 8^3 3. 3^4
 4. 12^2 5. 4^4 6. 10^5
 7. $2 \times 2 \times 2 \times 2 = 2^4$ 8. 81
 9. 1 10. 343 11. \$4,000
 12. yes 13. no 14. no
 15. yes 16. yes 17. no
 18. any two of the following: 121; 144; 169; 196

19.

Power	1^1	1^2	1^3	1^4	1^5
Value	1	1	1	1	1

1; 1 multiplied by itself is always 1, no matter how many times you multiply 1 by itself.

20. a. 4 b. 7 c. 10 21. 3^4

2.5 Activity

1. a. 14; 11; no b. 7; 7; yes c. 8; 2; no
 d. 8; 2; no e. 30; 16; no f. 16; 16; yes
 g. 15; 3; no h. 5; 5; yes
 2. a. $(4 + 5) \div 3$ b. $(8 \times 2) - 5$
 c. $16 \times (4 \div 4)$ or $(16 \times 4) \div 4$
 d. $(11 - 3) \div 8$ or $(11 - 8) \div 3$
 e. $(2 + 5) \times 10$
 3. a. 0 b. $\frac{17}{12}$ c. 7
 d. 0.9 e. \$4.15 f. \$46.52

4. An order of operations is necessary so that everyone will get the same answer. *Sample answer:* Without an order of operations, the expression $7 + 4 \times 5$ could be 55 or 27.

5. Changes the order of operations

2.5 Practice

1. 4 2. 4 3. 3
 4. 3 5. 32 6. 39
 7. 10 8. 7 9. 1
 10. $56 \div 4 \times 2 = 14 \times 2 = 28$
 11. 12 problems 12. 3
 13. 44 14. 16 15. 21
 16. 3 17. 52 18. 145 cents
 19. *Sample answer:* $14 \div 7 + 5 - 2 \times 3$
 20. \$37; $3 \times 9 + 2 \times 4 + 4 \times 3 - 10$
 21. \$25.50; $17 \times 6 \div 4$

Chapter 3

Fair Game Review

1–9. Sample answers are given.

1. 1800 2. 1800 3. 4 4. 20
 5. 5 6. 800 7. 1500 8. 13
 9. 12 batches 10. 5265 11. 5049
 12. 37 13. 158 14. 95

3.1 Activity

1. Check students' number lines.

- a. $1\frac{1}{5}$ b. $\frac{1}{2}$
 c. 1 d. $\frac{3}{4}$
 e. $1\frac{1}{5}$