pg. 23 #1-16

1. 8161
2. 2703
3. 13,524
4. 9
5. 27
6. 121
7. perfect square
8. not a perfect square
9. 9
10. 3
11. 6
12. 4
13. 16 seats
14. 225 $in.^2$
15. 3 mi
16. $38

pg. 480 #1-9 odd & 21-25 odd, 31, 39, 41, 43

1. $9, -1, 15$

3. -6; All of the other expressions are equal to 6.

5. 6

7. 10

9. 13

21. $|-4| < 7$

23. $|-4| > -6$

25. $|5| = |-5|$

31. $-7, -6, |5|, |-6|, 8$

39. $n \geq 0$

41. See *Taking Math Deeper.*

43. **a.** Player 3

b. Player 2

c. Player 1

pg. 258 #11-25 odd and WS - “Why Do Flies ...?”

11. >

13. The explanation about where the integers are located on a number line is incorrect;
$-7 < -3$; So, -7 is to the left of -3 on a number line.

15. $-4, -3, -2, 1, 2$

17. $-7, -4, 2, 3, 6$

19. $-20, -10, -5, 15, 25$

21. oxygen

23. always; The opposite of a positive integer is a negative integer. Positive integers are greater than negative integers.

25. **a.** Florida, Louisiana, Arkansas, Tennessee, California

b. California, Louisiana, Florida, Arkansas, Tennessee

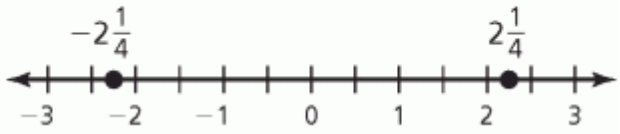
c. An elevation of 0 feet represents sea level.

pg. 264 (#3-25 odd) & HW: Study Guide

3. -2.6

5. *Sample answer:* $-2\frac{1}{4}$

7.



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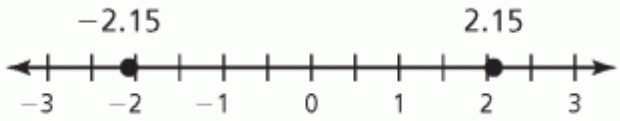


11. $<$

13. $<$

15. $>$

17. $>$

19. the larger sand dollar

21. $-1, -\frac{3}{4}, -\frac{5}{8}, -\frac{1}{20}, 0$

23. $-5, -4.9, -4.35, -4.3, -4$

25. See *Taking Math Deeper.*

Name Answers Date

Unit 1 Quiz Review

Write a positive or negative integer that represents the situation.

1. You drop 8 feet down a slide.

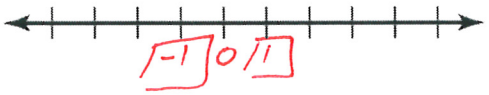
-8

2. You get a $1 raise.

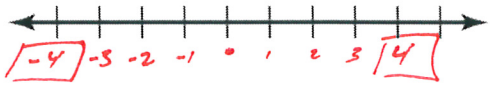
1

Graph the integer and its opposite.

3. -1



4. 4



Complete the statement using < or >.

5. -3 < 1

6. -6 > -8

Order the integers from least to greatest.

7. $2, -3, 0, 4, -1$

-3, -1, 0, 2, 4

8. $-5, -6, 1, 7, -1$

-6, -5, -1, 1, 7

9. $3, |-5|, -2, 1, -4$

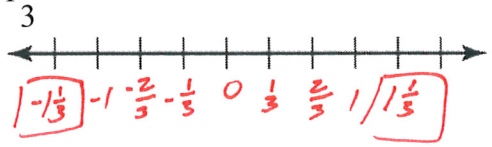
-4, -2, 1, 3, |-5|

10. $11, |-9|, 0, |8|, -5$

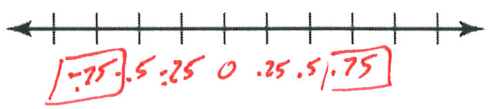
-5, 0, |8|, |-9|, 11

Graph the integer and its opposite.

11. $-1\frac{1}{3}$



12. 0.75



13. The height of Mount Rogers in Virginia is 5729 feet. After reaching the top, a mountain climber climbs down to a height of 5200 feet. Write an integer that represents the climber's change in height.

5729
-5200
529

-529 ft

14. The table shows the elevation of four swimmers. Which swimmer dives down the farthest?

Swimmer	A	B	C	D
Elevation (feet)	−13	−10	−18	−12

swimmer C

Find the absolute value.

15. $|8|$ 8

16. $|-3|$ 3

Complete the statement using $<$, $>$, or $=$.

17. $4 \_\_\_ -|8|$ ($>$, -8)

18. $|-5| \_\_\_ |-10|$ ($<$, 5, 10)

19. A scuba diver dives down 20 feet into the ocean. He then swims 11 feet back up towards the surface. What is the position of the scuba diver relative to the surface?

-9 below sea level

20. You and your friend play a video game. You have a final score of 40 points, and your friend has a final score of -21 points. By how many points did you win?

61 points

Evaluate the expression. SHOW ALL WORK.

21. $2 \times 4 + 3^2$

$= 2 \times 4 + 9$

$= 8 + 9$

$= 17$

22. $\dfrac{121 - 5 + 4(7)}{12}$

$= \dfrac{121 - 5 + 28}{12}$

$= \dfrac{144}{12}$

$= 12$

23. $2[(9 + 3) \div 4]$

$= 2[12 \div 4]$

$= 2[3]$

$= 6$

24. $5[13 - (2 + 3)]^2$

$= 5[13 - (5)]^2$

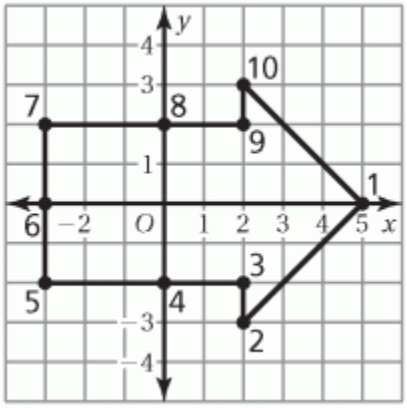
$= 5[8]^2$

$= 5(64)$

$= 320$

pg. 279 #4, 5-13 odd, & 27-34

4.



5. $(3, 1)$

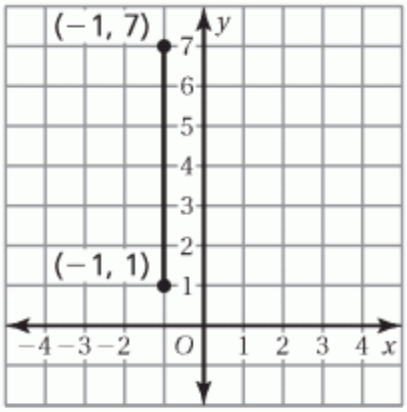
7. $(-2, 4)$

9. $(2, -2)$

11. $(-4, 2)$

13. $(4, 0)$

27.



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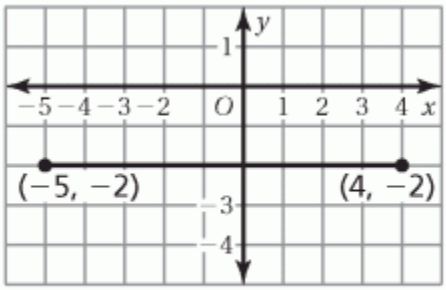
28.



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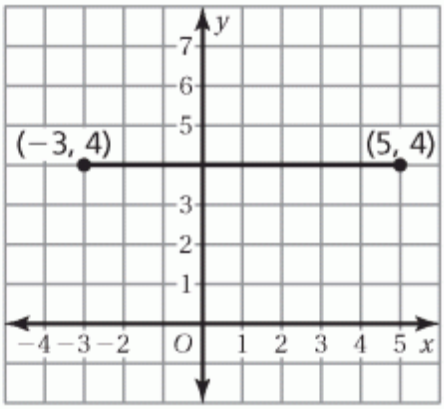
29.



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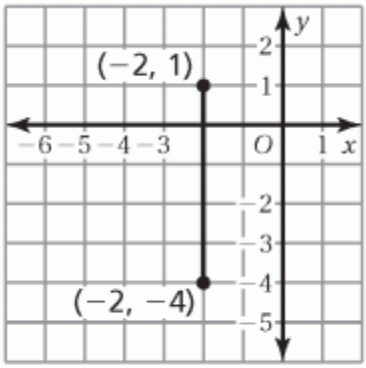
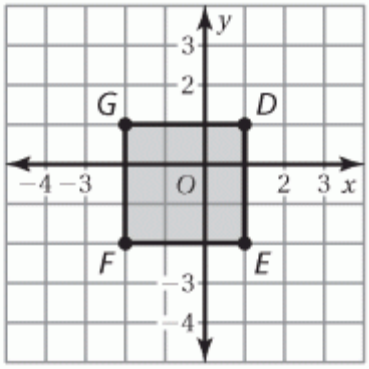
30.



5

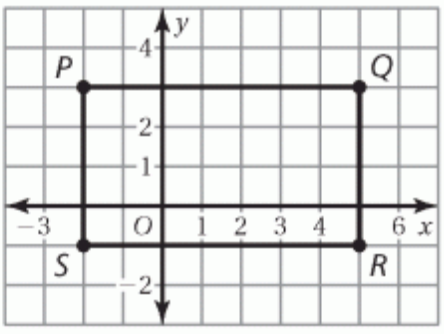
31. $(-2, 1)$

32.



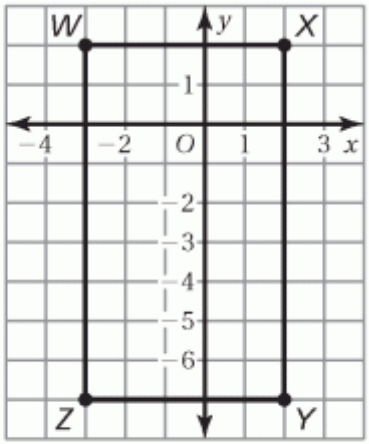
12 units; 9 units^2

33.



22 units; 28 units^2

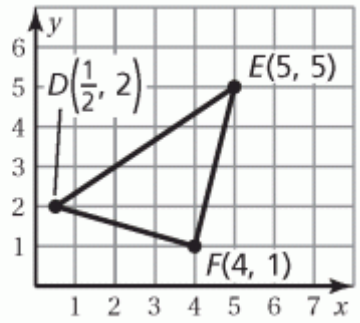
34.



28 units; 45 units^2

pg. 178 #7-25 odd, 29

7.



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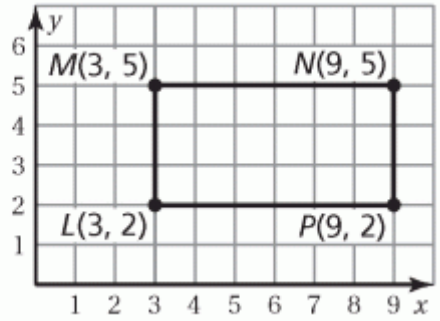

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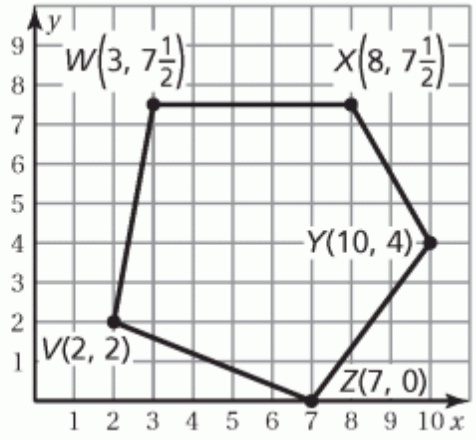
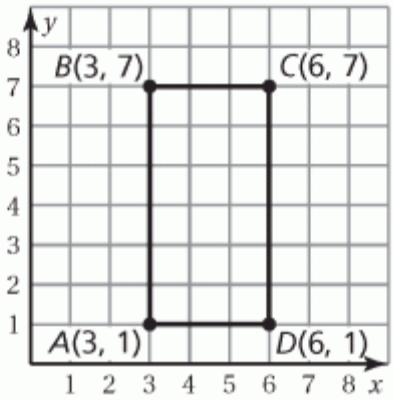


13. 24 units; 36 units^2

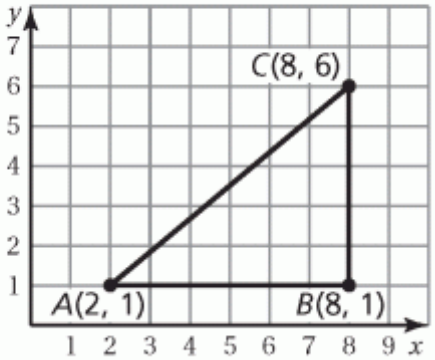
15. 28 units; 45 units^2

17. **a.** square **b.** 28 ft; 49 ft^2

19. *Sample answer:*



21. *Sample answer:*



23. 27 miles; There are only two ways to go from station P to station L. Traveling from station P to N to M to L is 27 miles. Traveling from station P to J to K to L is 33 miles.

25. 2.5 times larger

29. $\frac{5}{16}$

pg. 486 #19-35 odd & pg. 492 #19-29 odd, 37, 39, 45

19. -11

21. -4

23. -34

25. -10 and -10 are not opposites.
$-10 + (-10) = -20$

27. \$48

29. Use the Associative Property to add 13 and -13 first. -8

31. *Sample answer:* Use the Commutative Property to switch the last two terms. -12

33. *Sample answer:* Use the Commutative Property to switch the last two terms. 11

35. -27

19. 1

21. -22

23. -20

25. $-3 - 9$

27. 6

29. 9

37. 2

39. 3

45. always; It's always positive because the first integer is always greater.

Name Answers Date

Adding Integers Review

Add.

1) $-9 + (-3) = -12$

2) $4 + (-4) = 0$

3) $9 + (-6) = 3$

4) $5 + (-2) = 3$

5) $7 + (-13) = -6$

6) $-18 + 1 = -17$

7) $-12 + (-5) = -17$

8) $0 + (-7) = -7$

9) $12 + (-15) = -3$

10) Your bank account has a balance of –$21. You deposit $50. Write an expression for this. What is your new balance?

$-21 + 50 =$ $29

11) $7 + 5 + (-2) = 10$

12) $-13 + 7 + (-3) = -9$

13) $17 + (-5) + (-1) = 11$

14) $4 + 8 + (-8) = 4$

15) $-12 + (-4) + 9 = -7$

16) $-10 + 10 + (-3) = -3$

Use mental math to solve the equation.

17) $n + (-8) = 5$

$n = 13$

18) $4 + c = 0$

$c = -4$

19) $-6 + k = -14$

$k = -8$

20) a) Write three integers that do not all have the same sign that have a sum of −20.

example $-35 + 5 + 10$

b) Write three integers that do not all have the same sign that have a sum of 10.

example $-9 + 20 + -1$

21) The temperature at 6 A.M. is −12°F. During the next twelve hours, the temperature increases 25°F. During the following 5 hours, the temperature decreases 23°F. What is the temperature at 11 P.M.?

$-12 + 25 + -23 = -10°F$

Extra practice!!!

NOT REQUIRED. ONLY DO IF YOU WANT TO GET EXTRA PRACTICE!!

Why Did The Golfer Wear Two Pairs Of Pants?

Write the letter of each answer in the box containing the exercise number.

Add.

1. $12 + 5$

2. $7 + (-7)$

3. $-10 + 2$

4. $9 + (-6)$

5. $-15 + 27$

6. $23 + (-23)$

7. $-17 + 12$

8. $13 + (-15)$

9. $-9 + (-9)$

10. $-14 + (-11)$

11. $12 + (-10) + 16$

12. $15 + (-15) + 12$

13. $-22 + 30 + (-26)$

14. $-8 + (-8) + (-9)$

15. $37 + (-21) + (-16)$

16. $-42 + 8 + 17$

17. $-30 + 34 + (-9)$

18. $14 + (-21) + 7$

19. $-25 + 17 + 6$

20. $-4 + (-8) + (-6)$

Answers

S. 18	**N.** −18
O. 12	**C.** −8
L. −17	**H.** −25
I. −5	**E.** 0
T. 17	**G.** 3
A. −2	

21. A roller coaster climbs 84 feet on the first hill then drops 60 feet down. On the second hill the roller coaster climbs another 32 feet then drops 44 feet. What is the height at the end of the second hill?

7	13		3	8	11	15		14	18		4	21	1		19		10	12	16	2
17	9		5	20	6															

Name Answers Date

Subtracting Integers Review

Subtract.

1) $4 + (+5) =$ 9

2) $-6 + -4 =$ -10

3) $-9 + (+6) =$ -3

4) $10 + (+9) =$ 19

5) $-15 + -7 =$ -22

6) $-6 + (+14) =$ 8

7) $-1 + (+3) =$ 2

8) $15 + (+7) =$ 22

9) $-31 + -14 =$ -45

10) You are scuba diving at -8 feet. You dive 5 feet deeper. Write a subtracting expression illustrating this. What is your position in the water?

-8 - 5 = -13 feet

11) Write $7 - 3$ using addition.

7 + -3

12) Write $5 + (-3)$ using subtraction.

5 - 3

13) $8 + (+8) + -3 =$ 13

14) $9 + (+4) + 1 =$ 14

15) $7 + -12 + (+4) =$ -1

16) $-11 + (+8) + (+3) =$ 0

17) $-14 + -6 + (+2) =$ -18

18) $8 + 13 + (+5) =$ 26

Use mental math to solve the equation.

19) $a - 7 = 3$

a = 10

20) $b - (-8) = -3$

b = -11

21) The table shows the highest and lowest elevations for two cities.

City	Highest elevation (feet)	Lowest elevation (feet)
Long Beach, CA	360	–7
New Orleans, LA	25	–8

a) Find the range of elevations for Long Beach. 360 + +7 = 367 ft

b) Find the range of elevations for New Orleans. 25 + +8 = 33 ft

c) One of the cities has an average elevation of about 2 feet below sea level. Which city is it? New Orleans

Extra practice!!!

NOT REQUIRED. ONLY DO IF YOU WANT TO GET EXTRA PRACTICE!!

What Did The Sea Say To The Sand?

Write the letter of each answer in the box containing the exercise number.

Subtract.

1. $3 - 11$

2. $-5 - 12$

3. $14 - (-10)$

4. $-9 - (-7)$

5. $25 - (-8)$

6. $-13 - (-13)$

Evaluate the expression.

7. $-6 + 15 - (-4)$

8. $11 - 22 - (-8)$

9. $-14 - 7 - (-25)$

10. $17 + 8 - (-15)$

11. $-9 - (-4) - 2$

12. $-16 + 5 - 12$

Answers

J. 24	**H.** 12
W. –8	**G.** 40
O. 33	**E.** –7
D. –2	**I.** 0
S. 25	**N.** –17
V. –3	**A.** –23
U. 13	**T.** 4

13. The high temperature for a day in January was 7 degrees Fahrenheit. The low temperature that day was –5 degrees Fahrenheit. What is the difference in temperatures?

14. The top of a sailboat mast is 22 feet above the water surface. The bottom of the sailboat is 3 feet below the water surface. What is the difference in the elevations?

2	5	9	13	6	2	10		6	9		3	7	14	9		1	12	8	11	4

pg. 500 #17-31 odd, & 47 & pg.506 # 5-15 odd, 29-37 odd

17. 0

19. −30

21. 78

23. 121

25. −240,000

27. 54

29. −700

31. 0

47. **a.** 153; 141; 129

b. The price drops $12 every month.

c. no; yes; In August, you have $135 but the cost is $141. In September, you have $153 and the cost is only $129.

5. negative

7. negative

9. −3

11. 6

13. 0

15. −6

29. −8

31. 65

33. 5

35. 4

37. -400 ft/min

Name Answers Date

Unit 1 Study Guide

11.1 - Integers & Absolute Value

Complete the statement using <, >, or =.

1. $|-23|$ ___=___ 23

   23

2. $-|-78|$ ___<___ 52

   -78

3. You and your friend are swimming against the current. You move forward 15 feet. Your friend is not a strong swimmer, so he moves back 6 feet. Write each amount as an integer.

   15 and -6

Order the values from least to greatest.

4. $14, |-25|, -|-34|, 28, |0|$ ___$-|-34|$___, ___$|0|$___, ___14___, ___$|-25|$___, ___28___

   25 -34 28 0

Simplify the expression.

5. $|-249| =$ ___249___

6. $-|183| =$ ___-183___

Tell whether the statement is ***always***, ***sometimes***, or ***never*** true. Explain.

7. A negative integer is greater than its opposite. ___Never.___

   The opposite of a negative number is a positive number, which is always going to be bigger!

8. An integer is more than its opposite and less than 0. ~~Always~~ Never.

   This means the number would be negative, which is never bigger than its ~~positive~~ positive opposite.

9. An integer is less than its opposite. ___Sometimes___

   A negative number is less than its opposite.

6.3- Fractions & Decimals on the Number Line

Complete the statement using <, >, or =.

10. $-\frac{2}{9}$ ___>___ $-\frac{1}{3}$

11. $-1\frac{2}{3}$ ___<___ $-1\frac{1}{2}$

12. -6.3 ___<___ -4.9

13. -0.11 ___>___ -0.44

Order the integers from least to greatest.

14. $-\frac{5}{8}, -\frac{3}{4}, -1\frac{1}{8}, -\frac{3}{8}, -1\frac{1}{4}$

$-1\frac{1}{4}$, $-1\frac{1}{8}$, $-\frac{3}{4}$, $-\frac{5}{8}$, $-\frac{3}{8}$

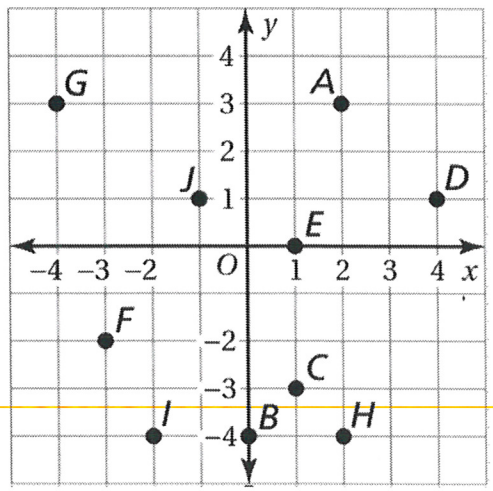
15. 0.7, −0.3, 0, 0.25, −0.37

−0.37, −0.3, 0, 0.25, 0.7

6.5 - The Coordinate Plane

Write an ordered pair corresponding to the point. State the quadrant that the point lies in.

		Ordered Pair	Quadrant
16.	Point A	(2, 3)	I
17.	Point C	(+1, −3)	IV
18.	Point F	(−3, −2)	III
19.	Point G	(−4, 3)	II



20. What axis is point B on? y-axis

21. What axis is point E on? x-axis

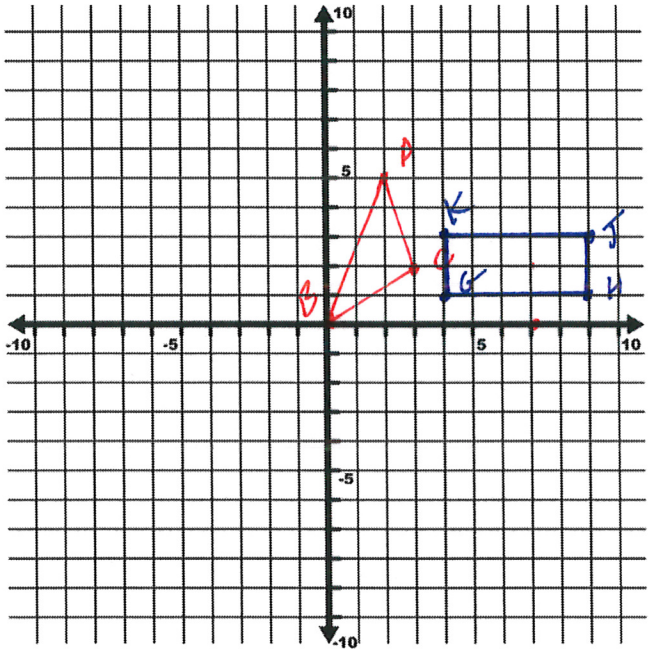
22. What is coordinate pair for the origin? (0, 0)

4.4 - Polygons in the Coordinate Plane

Draw the two polygons on the coordinate plane below with the given vertices.

23. $A(2, 5), B(0, 0), C(3, 2)$

24. $G(4, 1), H(9, 1), J(9, 3), K(4, 3)$



Find the perimeter and area of the polygon with the given vertices.

25. $E(0, 0), F(7, 0), G(7, 2), H(0, 2)$

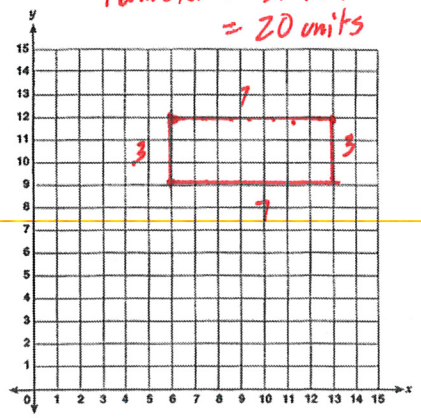
Perimeter = 2+7+2+7
= 18 units

Area = 2×7
= 14 units²

Draw a polygon with the given conditions in a coordinate plane.

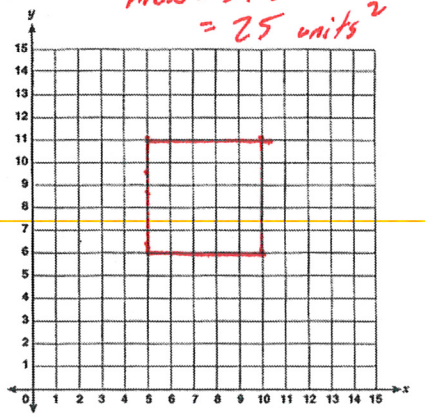
26. a rectangle with a perimeter of 20 units

Perimeter = 3+7+3+7
= 20 units



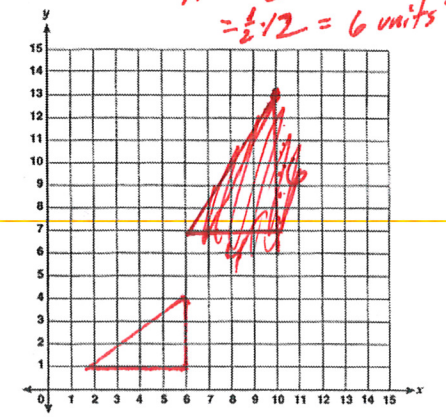
27. a square with an area of 25 square units

Area = 5×5
= 25 units²



28. a triangle with an area of 6 square units

$A = \frac{1}{2} \cdot 4 \cdot 3$
$= \frac{1}{2} \cdot 12 = 6$ units²



11.2 & 11.3- Adding & Subtracting Integers

Add.

29. $-9 + (-3)$ = -12

30. $6 + (-6)$ = 0

31. $9 + (-6)$ = 3

32. $7 + (-13)$ = -6

33. Your bank account has a balance of −$21. You deposit $50. What is your new balance?

-21 + 50 = $29

Subtract.

34. $8 - 13$ = -5

35. $18 - (-11)$ = 29

36. $-14 - 35$ = -49

37. $-51 - (-36)$ = -15

38. A dolphin is at −28 feet. It swims up and jumps out of the water to a height of 8 feet. Write a subtraction expression for the vertical distance the dolphin travels.

8 − (−28) = 36 ft

New → 8 ← old

Evaluate the expression.

39. $15 - 42 - (-36)$

= 9

40. $17 - (-22) - 22$

= 17

41. $-51 - (-23) + (-16)$

= -44

42. The table shows the record monthly high and low temperatures in International Falls, Minnesota.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High (°F)	48	58	76	93	95	99	98	95	95	88	73	57
Low (°F)	−46	46	−38	−14	11	23	34	30	20	2	−32	−41

a. What are the all-time high and all-time low temperatures? High: 99°F Low: -46°F

b. Which two **consecutive** months are additive inverses of each other? Jan and Feb

-46 + 46

11.4 & 11.5 - Multiplying & Dividing Integers

Multiply.

43. $(-8)(-12)$ $= 96$

44. $10 \bullet (-14)$ $= -140$

45. $-21 \bullet 4$ $= -84$

46. $-15 \bullet (-8)$ $= 120$

47. $5 \bullet (-11) \bullet (-4)$ $= 220$

48. $-15(-3)(-6)$ $= -270$

49. $13 \bullet 2 \bullet (-6)$ $= -156$

Evaluate the expression.

50. $(-12)^2$ $= 144$

51. -12^2 $= -144$

52. $(-7)^3$ $= -343$

53. $-(-2)^3$ $= 8$

Divide.

54. $21 \div (-3)$ $= -7$

55. $-15 \div (-3)$ $= 5$

56. $\frac{18}{-6}$ $= -3$

57. $-35 \div 7$ $= -5$

Evaluate the expression.

58. $6 - 12 \div (-3)$

$= 6 - (-4)$

$= 10$

59. $|-16| \div (-2)^2 - 4^2$

$= 16 \div 4 - 16$

$= 4 - 16$

$= -12$

60. $\frac{-10 + (-2)^3}{-3}$

$= \frac{-10 + (-8)}{-3}$

$= \frac{-18}{-3}$

$= 6$