Name Answers Date

Chapter 6 Study Guide

Section 6.1- Integers

Identify the number that represents the situation.

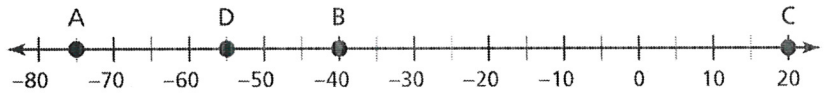
1) You run up 24 steps. 24

2) The temperature dropped 7 degrees. -7

3) You give away 2 of your video games. -2

4) You miss 3 days of practice. -3

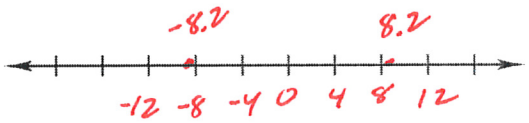
Identify the integer represented by the point on the number line.



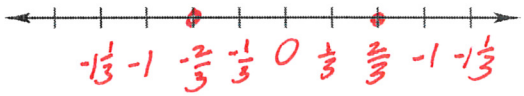
5) A -75 6) B -40 7) C 20 8) D -55

Every number has an opposite. Write the opposite of the decimal or fraction. Then graph the number and its opposite.

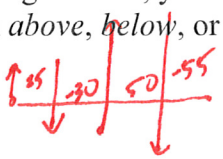
9) 8.2



10) $-\frac{2}{3}$



11) You are riding a roller coaster. During the ride, you climb 25 feet, descend 30 feet, climb 50 feet, and then descend 55 feet. Do you finish *above*, *below*, or at the *same* height as you started? Explain.



Below the height that I started

Section 6.2- Comparing & Ordering Integers

Complete the statement using < or >.

12) −4 < 0 13) 7 > 0 14) 3 > −3

15) −6 < 2 16) −9 < −5 17) −8 < −2

18) Describe and correct the error in comparing 2 and −5.

✗ $2 < 5$. So, $2 < -5$.

2 is bigger than -5

$2 > -5$

Order the integers from least to greatest.

19) 0, −2, 2, 3, −3 -3, -2, 0, 2, 3

20) 1, −3, 4, −4, 2 -4, -3, 1, 2, 4

21) A number is between −1 and −5. What is the least possible integer value of its opposite?

2

22) Nine students choose integers. Seven of them are

−16, 12, −13, −6, −5, 6, and 1.

a) Order the numbers from least to greatest.

-16, -13, -6, -5, 1, 6, 12

b) When all nine integers are ordered from least to greatest, the middle integer is −6. Describe the other two integers.

the other two integers must be less than -6

Section 6.3- Decimals and Fractions on a Number Line

Complete the statement using < or >.

23) $-\frac{2}{9}$? $-\frac{1}{3}$ >

24) $-1\frac{6}{10}$? $-1\frac{3}{10}$ <

25) $-\frac{2}{5}$? $-\frac{3}{10}$ <

26) $-1\frac{2}{3}$? $-1\frac{1}{2}$ <

27) −6.3 ? −4.9 <

28) −0.11 ? −0.44 >

29) −2.05 ? −2.50 >

30) −4.9 ? −4.6 <

Order the numbers from least to greatest.

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

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

32) 0.7, −0.3, 0, 0.25, −0.37

−0.37, −0.3, 0, 0.25, 0.7

33) A stock lost value on both Monday and Tuesday. On Monday, it changed by −5.7 points, and on Tuesday it changed by −3.8 points. On which day did it drop the least?

Tuesday

Section 6.4 - Absolute Value

Find the absolute value.

34) $|-4|$ 4

35) $|5.2|$ 5.2

36) $|-12|$ 12

37) $\left|2\frac{1}{3}\right|$ $2\frac{1}{3}$

38) $|-51|$ 51

39) $\left|-\frac{5}{6}\right|$ $\frac{5}{6}$

Complete the statement using <, >, or =.

40) $|-6|$ > 4

41) 10 = $|-10|$

42) $|-4.5|$ < $|-5.2|$

43) $\left|\frac{2}{3}\right|$ > $\left|-\frac{1}{6}\right|$

44) $|-11.3|$ < $|16.5|$

45) $|9|$ = $|-9|$

46) In a sailboat race series, a boat's score indicates the number of points it is behind the winning boat. Your boat has score −18 and your friend's boat has score −23.

a) Find the absolute value score of each boat.

18 and 23

b) Whose boat is farther behind the winning boat?

Your friend's boat

47) Two boats lie at the bottom of the ocean. In relation to sea level, the position of Boat A is −33 feet, and the position of Boat B is −25 feet.

a) Find the absolute value of each position.

33 and 25

b) Which boat is closer to sea level?

Boat A

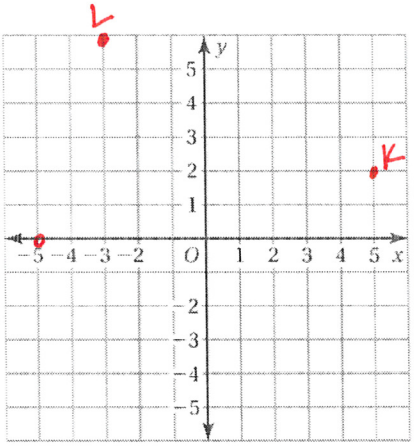
Section 6.5 - The Coordinate Plane and Distance

Plot the ordered pair in a coordinate plane. Tell which QUADRANT the letter lies in.

48) $K(5, 2)$ I

49) $L(-3, 6)$ II

50) $M(-5, 0)$ x-axis



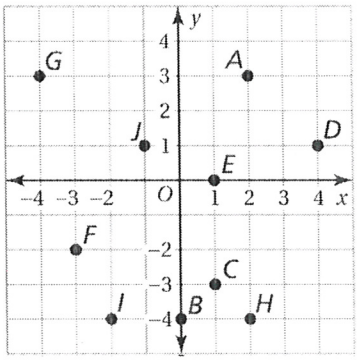
Write an ordered pair corresponding to the point.

51) Point A (2, 3)

52) Point B (0, -4)

53) Point G (-4, 3)

54) Point H (2, -4)



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

55) The y-coordinate of a point in Quadrant II is positive. Always

56) The x-coordinate of a point on the y-axis is zero. Always

57) The y-coordinate of a point on the y-axis is positive. Sometimes

58) Your house is located at $(0, 0)$.

a) To get from your house to school, you walk 2 blocks east and 1 block south. What ordered pair corresponds to the location of your school? (2, -1)

b) To get from your house to the mall, you walk 4 blocks west and 3 blocks north. What ordered pair corresponds to the location of the mall? (-4, 3)

c) Is your school or the mall closer to your home? School

d) Describe how you would walk from your school to the mall Six blocks west and 4 blocks north