

Chapter 6 Review

See how well you can answer the following review questions

Vocabulary Review

absolute value (p. 207)
graph of an inequality (p. 224)
inequality (p. 223)

integers (p. 206)
opposites (p. 206)
rational number (p. 213)

solution of an inequality
(p. 224)

Choose the correct vocabulary term to complete each sentence.

1. A(n) ? is a mathematical sentence that contains $<$, $>$, \leq , \geq , or \neq .
inequality
2. The numbers -4 , $-\frac{2}{3}$, $1\frac{5}{8}$, 0 , and 5.7 are ?.
rational number
3. -3 and 3 are integers that are ?
opposites
4. The number 7 is the ? of both -7 and 7 .
opposite

Lesson 6-1

- To use integers, opposites, and absolute values to represent real-world situations

Integers are the set of positive whole numbers, their opposites, and 0. The opposite of the opposite of a number is the number itself. The **absolute value** of a number is its distance from 0 on a number line.

Use an integer to represent each situation.

5. 14 degrees below zero 6. gain 6 pounds

Write the opposite of each integer.

7. -4 8. 5 9. -33 10. 20
11. Write the absolute value of the opposite of 9.

Lesson 6-2

- To compare and order integers

You can use a number line to help you compare and order integers.

Compare, using $<$ or $>$.

12. -5 0 13. -8 12 14. 4 $|-9|$ 15. -12 -14

Order each set of integers from least to greatest.

16. $-1, 1, 2, -2$
17. $0, -4, 5, -6$
18. $-3, 5, -7, 9$

Lesson 6-3

- To show that numbers are rational and to plot rational numbers on a number line

A **rational number** is any number that can be written as a quotient of two integers in which the denominator is not zero. Integers, fractions, and certain types of decimals are rational numbers. Rational numbers can be plotted on a horizontal or a vertical number line.

Show that each number is a rational number by writing it as a quotient of two integers.

19. 21 20. -3.1 21. $1\frac{5}{9}$ 22. -7

Plot each rational number on a number line.

23. $3\frac{1}{2}$ 24. -2.3 25. $-\frac{5}{8}$ 26. 0.75

23.

24.

25.

26.

Lesson 6-4

- To compare and order rational numbers

A number line can help you compare and order rational numbers.

Compare, using $<$, $=$, or $>$.

27. -4.6 -4.06 28. $-\frac{7}{10}$ $-\frac{9}{10}$

29. -3.5 $-3\frac{1}{5}$ 30. -5.28 -5.85

31. Order the temperatures from greatest to least.

-4.9°C , $-4\frac{1}{2}^{\circ}\text{C}$, -4.3°C , -5°C , $-4\frac{1}{4}^{\circ}\text{C}$

Lessons 6-5 and 6-6

- To express and identify solutions of inequalities
- To solve one-step inequalities by adding or subtracting

An **inequality** is a mathematical sentence that contains $<$, $>$, \leq , \geq , or \neq . An inequality shows the relationship between quantities that are not equivalent. A **solution of an inequality** is any number that makes the inequality true.

Tell whether $x \leq -4$ is *true* or *false* for each value for x .

32. $x = 4$ 33. $x = -10$ 34. $x = -2$ 35. $x = -6$

36.

37.

38.

39.

Graph each inequality on a number line.

36. $p > -4$ 37. $h < 4$ 38. $k \geq -5$ 39. $g \leq 3$

To solve an inequality, use inverse operations to isolate the variable.

Solve each inequality.

40. $q + 6 < 9$ 41. $t - 7 < 2$ 42. $v - 4 > 12$ 43. $v + 9 \geq 11$

44. You want to read at least 50 pages in a book this week. You have already read 16 pages. Write and solve an inequality to find how many more pages you need to read this week.

Write an inequality: There are more than 90 counties in Iowa

Also on the test will be adding integers, subtracting integers, multiplying integers, and dividing integers

$$3 + (-5) =$$

$$5 - (-6) =$$

$$4 \times (-3) =$$

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

$$(-3) - 2 =$$

$$(-5) \times (-6) =$$

$$(-24) \div (-6) =$$

$$12 \div (-2) =$$

Tomorrow's test has 33 questions. You will not be able to use any notes or any calculators. You can use scratch paper.