Lesson Check

Do you know HOW?

Write an example from daily life that uses each type of real number.

1. whole numbers

2. integers

3. rational numbers

Identify the property illustrated by the equation.

4. $5 + (-5) = 0$

5. $2 \cdot (4 \cdot 5) = (2 \cdot 4) \cdot 5$

Do you UNDERSTAND? 🄫 MATHEMATICAL PRACTICES

🄫 6. **Vocabulary** Identify another name for a reciprocal.

🄫 7. **Compare and Contrast** How is the Additive Identity Property similar to the Multiplicative Identity Property? How is it different?

🄫 8. **Reasoning** There are grouping symbols in the equation $(5 + w) + 8 = (w + 5) + 8$, but it does not illustrate the Associative Property of Addition. Explain.

9. Give an example of a number that is not a rational number. Explain why it is not rational.

Practice and Problem-Solving Exercises 🄫 MATHEMATICAL PRACTICES

A Practice   Classify each variable according to the set of numbers that best describes its values.

◀ **See Problem 1.**

10. the number of times n a ball bounces; the height h from which the ball is dropped

11. the year y; the median selling price p for a house that year

12. the circumference C of a circle found by using the formula $C = 2\pi r$

Graph each number on a number line.

◀ **See Problem 2.**

13. 0	14. $-\sqrt{24}$	15. -2	16. $2\frac{1}{2}$	17. $-4\frac{2}{3}$
18. 3.5	19. -1.4	20. $\sqrt{10}$	21. $-2\frac{1}{5}$	22. 4.8

Compare the two numbers. Use $>$ or $<$.

◀ **See Problem 3.**

23. $16, \sqrt{16}$	24. $-4, -\sqrt{4}$	25. $\sqrt{5}, \sqrt{7}$
26. $-\sqrt{3}, -\sqrt{5}$	27. $5, \sqrt{22}$	28. $-\sqrt{38}, 6$
29. $4, \sqrt{12}$	30. $-8, \sqrt{70}$	31. $\sqrt{63}, 7.5$
32. $4.7, \sqrt{26}$	33. $\sqrt{75}, 9$	34. $12, -\sqrt{150}$

Name the property of real numbers illustrated by each equation.

◀ **See Problem 4.**

35. $\pi(a + b) = \pi a + \pi b$

36. $-10 + 4 = 4 + (-10)$

37. $(2\sqrt{7}) \cdot \sqrt{3} = 2(\sqrt{7} \cdot \sqrt{3})$

38. $29 \cdot \pi = \pi \cdot 29$

39. $-\sqrt{5} + 0 = -\sqrt{5}$

40. $\frac{4}{7} \cdot \frac{7}{4} = 1$