

Assignment 38

10-2 Skills Practice

The Real Number System

Name all of the sets of numbers to which each real number belongs. Let W = whole numbers, Z = integers, Q = rational numbers, and I = irrational numbers.

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|---------------------|------------------|--------------------|
| 1. 12 | 2. 25 | 3. -5 |
| 4. $\frac{1}{8}$ | 5. $\frac{1}{9}$ | 6. 0.343434... |
| 7. $\sqrt{31}$ | 8. $\sqrt{7}$ | 9. $\frac{25}{3}$ |
| 10. $-\frac{32}{4}$ | 11. 6.54 | 12. 24.6 |
| 13. 418 | 14. 0 | 15. 0.050050005... |

Determine whether each statement is *sometimes*, *always*, or *never* true.

- A whole number is a rational number.
- A rational number is a whole number.
- A negative number is an integer.
- Zero is an irrational number.

Replace each \bullet with $<$, $>$, or $=$ to make a true statement.

- | | |
|-------------------------------------|----------------------------------|
| 20. $\sqrt{4} \bullet 2\frac{3}{7}$ | 21. $\sqrt{5} \bullet 2.1$ |
| 22. $-\sqrt{12} \bullet -3.5$ | 23. $\sqrt{104.04} \bullet 10.2$ |
| 24. $7.8 \bullet \sqrt{55}$ | 25. $15.1 \bullet \sqrt{231}$ |

Order each set of numbers from least to greatest.

- $5\frac{1}{3}$, 5.3, $\sqrt{28}$, $2\frac{1}{4}$
- $\sqrt{53}$, $7\frac{1}{4}$, $\frac{36}{5}$, 7.27
- 9.35, $-\sqrt{72.75}$, $-9\frac{2}{10}$, -9