

## 1-2

## Study Guide and Intervention

## Properties of Real Numbers

**Real Numbers** All real numbers can be classified as either rational or irrational. The set of rational numbers includes several subsets: natural numbers, whole numbers, and integers.

<b>R</b>	real numbers	{all rationals and irrationals}
<b>Q</b>	rational numbers	{all numbers that can be represented in the form $\frac{m}{n}$ , where $m$ and $n$ are integers and $n$ is not equal to 0}
<b>I</b>	irrational numbers	{all nonterminating, nonrepeating decimals}
<b>N</b>	natural numbers	{1, 2, 3, 4, 5, 6, 7, 8, 9, ...}
<b>W</b>	whole numbers	{0, 1, 2, 3, 4, 5, 6, 7, 8, ...}
<b>Z</b>	integers	{... -3, -2, -1, 0, 1, 2, 3, ...}

**Example**

Name the sets of numbers to which each number belongs.

a.  $-\frac{11}{3}$     rationals (Q), reals (R)

b.  $\sqrt{25}$   
 $\sqrt{25} = 5$     naturals (N), wholes (W), integers (Z), rationals (Q), reals (R)

**Exercises**

Name the sets of numbers to which each number belongs.

1.  $\frac{6}{7}$

2.  $\sqrt{81}$

3. 0

4. 192.0005

5. 73

6.  $34\frac{1}{2}$

7.  $\frac{\sqrt{36}}{9}$

8. 26.1

9.  $\pi$

10.  $\frac{15}{3}$

11.  $-4.\overline{17}$

12.  $\frac{\sqrt{25}}{5}$

13. -1

14.  $\sqrt{42}$

15. -11.2

16.  $-\frac{8}{13}$

17.  $\frac{\sqrt{5}}{2}$

18.  $33.\overline{3}$

19. 894,000

20. -0.02