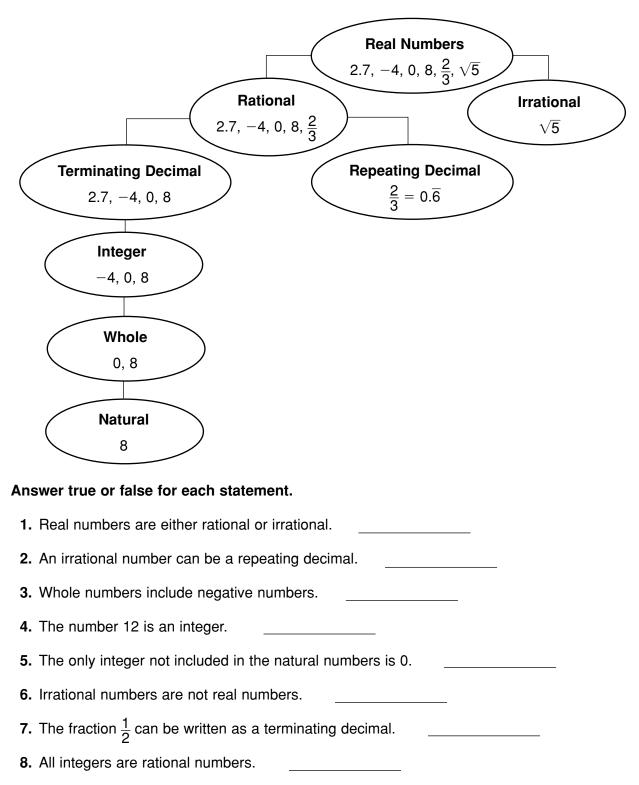
Date	Class

## **Reading Strategies 1-5** Understanding Relationships

Name

The flow chart below can help you understand the relationships among different subsets of the real numbers.



LESSON Reteach	
Square Roots and Real Numbers continued	1-5 How Much Fencing is Needed?
Real Numbers	A farmer wishes to raise alpacas. The alpaca is related to the llama and is best known for its fleece. Alpacas can be prey for dogs, wolves and
	coyotes, so it is important to build a fence around any alpaca farm.
This flowchart shows the	The farmer currently owns a plot of land in the shape of a square. He
subsets of the real numbers (Terminating Decimals) (Repeating Decimals)	knows that the land measures 532,900 square feet. To give the alpacas more room to graze, he buys an adjacent plot of land, which is in the
and how they are related. To identify the classifications of Non-Integers Integers	shape of a right triangle. Both plots of land are shown below.
a real number, start at the	
top and work your way down. Negative Integers Whole Numbers	
Zero Natural Numbers	532,900 ft <sup>2</sup>
	aft
Write all of the classifications that apply to the real number -4.	x ft b ft
-4 can be shown on a number line. It is real. Real Numbers	The side labeled hift has a learnin of 700 fact granter than the side labeled
-4 can be written as $-\frac{4}{1}$ so it is rational. Bational Numbers Urrational Numbers	The side labeled <i>b</i> ft has a length of 700 feet greater than the side labeled $x$ ft. The farmer needs to determine the perimeter so he can build a fence.
	Complete the steps below to find how much fencing the farmer needs.
Its decimal representation terminates: $-4 = -4.0$ . Terminating Decimals Repeating Decimals	700
-4 is an integer. Non-Integers Integers	
	2. Find the value of <i>a</i> 730
-4 is a negative integer. Stop. There are no more subsets in the Whole Numbers	3. Find the value of <i>b</i> 1430
chart below negative integers.	The equation $a^2 + b^2 = c^2$ relates the lengths of the sides of a right triangle.
-4: real number, rational number, terminating decimal, integer	-
Write all classifications that apply to each real number.	5. Find the value of <i>b</i> <sup>2</sup> 2,044,900
9. 24 real number, rational number, terminating decimal, integer, whole number, natural number	6. Find the value of $a^2 + b^2$ . 2,577,800 (This is $c^2$ .)
whole number, natural number	7. Find the value of c. Round to the nearest whole number1606
3	8. Find the perimeter of the land. 5226 ft
11. $\sqrt{5}$ real number, irrational number	E000 #
	9. How much fencing does the farmer need? 5220 It
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Problem Solving     Square Roots and Real Numbers	Reading Strategies           Understanding Relationships
<ul> <li>1-5 Square Roots and Real Numbers</li> <li>1. Jack is building a square pen for his dog. If he wants the area of the pen to be 121 square feck, how long should he make each side of the pen?</li> <li>2. Danny needs a square-shaped picture to cover a hole in his wall. It has to cover a hole in his wall. It has to cover a hole in his wall. It has to access the state of the pen?</li> <li>2. Danny needs a square-shaped picture to cover a hole in his wall. It has to access the hole actual side length of the side to the nearest tenth. Then write all classifications that apply to has activity the actual side length: natural, whole, integer, rational, terminating decimal, repeating decimal, and irrational.</li> </ul>	Reading Strategies         Understanding Relationships         The flow chart below can help you understand the relationships among different subsets of the real numbers.         Real Numbers         2.7, -4, 0, 8, $\frac{2}{3}$ , $\sqrt{5}$ Irrational         2.7, -4, 0, 8, $\frac{2}{3}$ Terminating Decimal         2.7, -4, 0, 8         Repeating Decimal         2.7, -4, 0, 8, $\frac{2}{3}$ Integer
Square Roots and Real Numbers     Square Now State and State	<b>1-5</b> Understanding Relationships The flow chart below can help you understand the relationships among different subsets of the real numbers. Real Numbers 2.7, −4, 0, 8, $\frac{2}{3}$ , $\sqrt{5}$ Terminating Decimal 2.7, −4, 0, 8 $\frac{2}{3} = 0.\overline{6}$
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Square Roots and Real Numbers     Square Roots and Real Numbers     Square shaped picture     dog. If he wants the area of the pen to     be 121 square feck, how long should he     make each side of the pen? <ul> <li>2. Danny needs a square-shaped picture         to cover a hole in his wall. It has to         cover at heast 441 square inches of wall         space. What is the smallest side length         the picture can have?         </li> <li>3. The Statue of Liberty, which sits on         Liberty Island in New York Harbor, is         151 <u>12</u> feet high, from base to torch.         Write all classifications that apply to         151 <u>11</u>: natural, whole, integer,         rational, terminating decimal, repeating         decimal, and irrational.         </li> </ul> <li> <ul> <li>rational number</li> <li>2.2</li> <li>2.2</li> <li>2.3</li> <li>2.4</li> <li>2.4</li> <li>2.5</li> <li>2.6</li> <li>2.6</li> <li>2.7</li> <li>2.6</li> <li>2.7</li> <li>2.7</li> <li>2.8</li> <li>2.9</li> <li>2.1</li> <li>2.1</li> <li>2.1</li> <li>2.1</li> <li>2.1</li> <li>2.1</li> <li>2.1</li> <li>2.1</li> <li>2.2</li> <li>2.2</li> <li>2.2</li> <li>3.7</li> <li>3.7</li> <li>3.7</li> <li>3.7</li> <li>3.7</li> <li>4.8</li> <li>4.4</li> <li>4.4</li> <li>4.4</li> <li>4.4</li> <li>4.4</li> <li>4.5</li> <li>4.5</li> <li>4.6</li> <li>4.6</li> <li>4.7</li> <li>4.7</li> <li>4.8</li> <li>4.8</li> <li>4.9</li> <li>4.9</li> <li>4.9</li></ul></li>	<b>15</b> Understanding Relationships The flow chart below can help you understand the relationships among different subsets of the real numbers.
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<ul> <li>1. Jack is building a square pen for his dog. If he wants the area of the pen to be 121 square fect, how long should he make each side of the pen?</li> <li>2. Danny needs a square-shaped picture to cover a hole in his wall. It has to the headth has to cover a hole in his wall. It has to cover a hole in his wall. It has to cover a hole in his wall. It has to cover a hole in his wall. It has to the headth has to the headth has to the headth has the headth has to the headth has to the headth has the headth has headth has the headth has thea</li></ul>	<ul> <li><b>15</b> Understanding Relationships</li> <li>The flow chart below can help you understand the relationships among different subsets of the real numbers.</li> <li>Real Numbers <ul> <li>2.7, -4, 0, 8, 2/3, √5</li> <li>Irrational</li> <li>2.7, -4, 0, 8, 2/3</li> <li>Irrational</li> <li>2.7, -4, 0, 8, 2/3</li> <li>Integer <ul> <li>-4, 0, 8</li> <li>2.7, -4, 0, 8</li> <li>3</li> </ul> </li> <li>Answer true or false for each statement.</li> <li>1. Real numbers are either rational or irrational.</li> <li>Integer</li> <li>An irrational number can be a repeating decimal.</li> </ul></li></ul>
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