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Name: _____ Topic: Sets of Numbers

Instructions: Check every set to which each number belongs. Be prepared to justify your responses.

Number	Whole	Natural	Rational	Integer	Irrational	Not a real number
-25						
$\frac{1}{25}$						
$\sqrt{25}$						
$\sqrt{-25}$						
0.25						
0.2525…						
0.12345…						
$\sqrt[3]{25}$						

1. A **set** is a collection of objects called **elements** surrounded by braces (e.g., $\{a,b,c\}$).

   Examples of sets of real numbers:

   a) *Whole Numbers* {0, 1, 2, 3, … }

   b) *Natural Numbers* {1, 2, 3, …}

   c) *Integers* {…, –2, –1, 0, 1, 2, … }

   d) Rational Numbers

      a. can be expressed as fractions. Examples _____

      b. can be expressed as terminating decimals. Examples _____

      c. can be expressed as repeating decimals. Examples _____

   e) *Irrational Numbers* are numbers that cannot be expressed as a ratio of two integers. Examples _____

   f) The set of *Real Numbers* includes all the rationals and all the irrationals.