***A rational number*** is a number that can be in the form where and are integers and .

A rational number can be made by dividing two integers, or it is a number that can be written as the ratio of two integers.

**Rational Numbers**

Include fractions, terminating decimals,

**Irrational Numbers**

Include square roots that don’t work out to be ratios (no perfect answers) and decimals that don’t repeat but that never end.

repeating decimals, integers, whole

and natural numbers.

**Integer**

**Whole Numbers**

**Natural numbers**

**Sample Problem 1**: **Identify each number as rational or irrational.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | | **b.** | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |

**Sample Problem 2**: **Write the numbers in order from least to greatest.**

|  |  |  |  |
| --- | --- | --- | --- |
| **a.** |  | **b.** |  |
|  |  |  |  |
| **c.** |  | **d.** |  |
|  |  |  |  |

**Sample problem 3: Graph each pair of numbers on the number line. Use the graph and write to compare the numbers.**

|  |  |  |
| --- | --- | --- |
| **a.** |  | **1**  **2**  **3**  **4**  **5**  **0**  **-1**  **-2**  **-3**  **-4** |
| **b.** |  | **1**  **2**  **3**  **4**  **5**  **0**  **-1**  **-2**  **-3**  **-4** |
| **c.** |  | **1**  **2**  **3**  **4**  **5**  **0**  **-1**  **-2**  **-3**  **-4** |
| **d.** |  | **1**  **2**  **3**  **4**  **5**  **0**  **-1**  **-2**  **-3**  **-4** |

**Sample Problem 4**: **Identify each decimal as repeating or terminating.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **a.** | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | | **b.** | |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | |