***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.** |

|  |  |
| --- | --- |
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