**Place Value of Decimals**

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| The first thing to learn about decimals is their place values.  |
| 4,567,891.234 |
| https://www73.studyisland.com/userfiles/placevaluethousandths.gif |

**Example:**

How is the number 51.042 written in words?

First, figure out the place value for each number.

5 is in the **tens** place.
1 is in the **ones** place.
0 is in the **tenths** place.
4 is in the **hundredths** place.
2 is in the **thousandths** place.

So, the number is written **fifty-one and forty-two thousandths**.

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| **Expanded Notation**

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| Numbers can be written in many different formats. You need to know how to convert between the different formats. [Standard Notation](https://www73.studyisland.com/lessWin.cfm?QGID=161362&tempID=1492&seqNum=2&showComment=0#stan) and [Expanded Notation](https://www73.studyisland.com/lessWin.cfm?QGID=161362&tempID=1492&seqNum=2&showComment=0#exp) |

Standard Notation Standard notation is the most common format for writing numbers. The following numbers are all in standard notation. **122,1763453,423,001.03**Expanded Notation A number written in expanded notation is broken down into parts just like it is in a place-value table.5,204.49 written in expanded notation is: **5,000 + 200 + 4 + 0.4 + 0.09** |

**Place Value - Decimals**

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| 0.781 |
| *ones* | *decimal* | *tenths* | *hundredths* | *thousandths* |
| 0 | . | 7 | 8 | 1 |

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| ***Tips***Students usually miss these questions because they make careless mistakes. Here are some tips to help avoid careless mistakes:  Look at all the possible answers before answering.  Double check your answer.  Take your time. |

The first place to the right of the decimal is the **tenths** place.
The second place to the right of the decimal is the **hundredths** place.
The third place to the right of the decimal is the **thousandths** place.

**Examples:**

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| **Question:** | What digit is in the tenths place for the following number? 16.79 |
| **Answer:** | 7 |
| **Question:** | What digit is in the hundredths place for the following number? 4.81 |
| **Answer:** | 1 |
| **Question:** | What digit is in the thousandths place for the following number? 97.813 |

**Comparing and Ordering Numbers**

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| To compare numbers, it is important to know the following symbols:

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| 1. **<** means **less than** |
| 2. **>** means **greater than** |
| 3. **=** means **equal to** |

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**Examples:**

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| To show that **1 is less than 2** write:  | **1 < 2** |
| To show that **4 is greater than 2** write:  | **4 > 2** |
| To show that **2 is equal to 2** write:  | **2 = 2** |

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| When comparing or ordering numbers, use the following tips:

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| 1. Convert fractions to decimals because they are easier to compare. |
| 2. Double check your answer in order to avoid any mistakes. |
| 3. Remember with symbols **<** and **>**, the symbol points to the smaller value. |

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