

Grade 7 Review

Decimal Place Values and Rounding

Decimal Numbers

A decimal number is a number comprised (made up of) of a whole number part and a decimal part separated by a decimal point.

Example:

584 . 2037

Whole Number

Decimal Part

Decimal Numbers

The table below gives the name of the place value of each digit.

BILLIONS			MILLIONS			THOUSANDS			ONES			.	DECIMALS					
<i>hundred billions</i>						<i>hundred thousands</i>			<i>hundreds</i>				<i>tenths</i>					
<i>ten billions</i>						<i>ten thousands</i>			<i>tens</i>				<i>hundredths</i>					
<i>billions</i>						<i>thousands</i>			<i>ones</i>				<i>thousandths</i>					
			<i>hundred millions</i>			<i>hundred thousands</i>							<i>ten thousandths</i>					
			<i>ten millions</i>			<i>ten thousands</i>							<i>hundred thousandths</i>					
			<i>millions</i>			<i>thousands</i>							<i>millionths</i>					

Decimal Numbers

In a decimal number, the place value of a digit depends upon its place in the number.

Ex: In the number 745.9208, the 2 occupies the hundredths place.

How do we read this number?

Seven hundred forty five and nine thousand two hundred eight ten thousandths

Rounding

Rounding a decimal number is no different than rounding a whole number.

Pre-step: Underline the digit that you want to round

Step 1 - Look at the digit on the right of the digit that we want to round.

Step 2 - If the digit is greater than or equal to 5, increase the digit that we want to round by 1 (5 goes to 6, 7 goes to 8 etc)

Step 3 - If the digit is less than 5, we do not change the digit that we want to round (it stays the same)

Step 4 - The digits that originally appeared after the digit we want to round, are no longer written (we replace the digits by 0)

Rounding

Example:

Round 4.7852 to the nearest

- a. Tenth
- b. Hundreth
- c. Thousandth

Rounding

a. 4.7852 to the nearest tenth

Pre- step: We want to round the 7

4. 7852

Step 1: Look at the number to the right of 7

4. 7852

Step 2: Is it greater than, equal to or less than 5? **Greater than**, therefore 7 becomes 8.

We re-write our decimal number as: 4.8

Rounding

b. 4.7852 to the nearest hundredth

Pre- step: We want to round the 8

4. 7852

Step 1: Look at the number to the right of 8

4. 7852

Step 2: Is it greater than, equal to or less than 5? **Equal to**, therefore 8 becomes 9.

We re-write our decimal number as: 4.79

Rounding

c. 4.7852 to the nearest thousandth

Pre- step: We want to round the 5

4. 7852

Step 1: Look at the number to the right of 5

4. 785²

Step 2: Is it greater than, equal to or less than 5? **Less than**, therefore 5 stays a 5.

We re-write our decimal number as: 4.785

Homework

Grade 7 Review Worksheet for next class