

Chapter 02 : Ordering decimal numbers (book p.13)

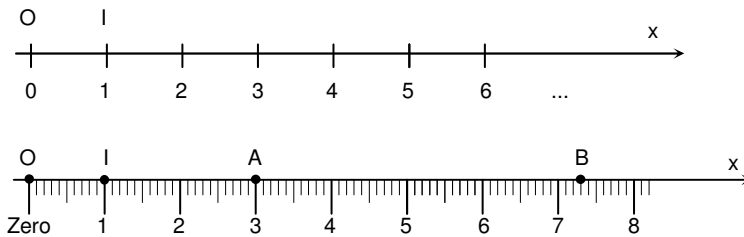
Try this : <http://www.mathsisfun.com/decimals-menu.html>

I. Abscissa of a point.

Definition 1 : When a point is placed on a graduated line, the number related to the point is called abscissa of the point.

To graduate from tenth to tenth, you share each "ones" in ten equal parts; to graduate from hundredths to hundredths, you share each "tenth" in ten equal parts, and so on ...

Warning : 1 « ones » isn't always represented by 1 cm.



In this example :

7,3 is the point B's abscissa.

The point B has 7,3 as its abscissa.

We'll write : B(7,3).

II. Comparing numbers, enclosing* numbers.

*I'm not sure about this translation, but couldn't find a better one.

Definition 2 :

< means « smaller than » (increasing order)

> means « bigger than » (decreasing order)

To compare (say which one is the smallest and which one the biggest) two decimal numbers, you first compare their thousands number, then, if they are equal, their hundreds number, and so on the tens, ones, tenths, hundredths, thousandths et cetera.

Examples : $8\,757,45 < 8\,762,01458$

$45,47 > 45,43789$

Definition 3 : To enclose a number means to place it between two other numbers, a smaller and a bigger.

Example : $45 < 45,43789 < 46$ (we enclosed 45,43789 between 45 and 46).

III. Approached values, rounding numbers.

Approached values :for example with the number 74,7352

	Rounded down	Rounded up	
To the ones	74	75	$74 < 74,7352 < 75$
To the tenths	74,7	74,8	$74,7 < 74,7352 < 74,8$
To the hundredths	74,73	74,74	$74,73 < 74,7352 < 74,74$
To the thousandths	74,735	74,736	$74,735 < 74,7352 < 74,736$

Truncation : It's the approached value, rounded down (for a truncation to the tenths, you just « cut » the number after the tenths digits).

Rounding : For a rounding to the tenths, for example, you « cut » the number after the tenths digit, but you choose :

If the 1 st number after the cut is :	You choose the approached value :
0 ;1 ;2 ;3 ;4	Rounded down
5 ;6 ;7 ;8 ;9	Rounded up