

Ordering Decimals.

Advice and support:

Questions asking you to order nearly always present the numbers in horizontal format - this makes comparing numbers with a differing number of digits difficult. The best solution to that is create your own vertical table that will allow you to compare them and then put them into order. You'll then use the same strategies you used yesterday to do this.

Example:

Put the following numbers in ascending (smallest to largest) order:

0.6	0.026	0.16	0.06	0.079

- 1) On a scrap of paper, set up a vertical place value table with the columns all lined up and a space for the decimal point.
- 2) Place all the numbers into the chart.
- 3) Fill in the spaces with "place holders" (using a zero – they're highlighted orange to the right). Place holders make it easier to compare numbers as they all have the same number of digits.

- 4) Go through the chart using the strategy from yesterday – start with the column on the left. Because we've been asked for *ascending* order, we're looking for the lowest value – in this case "0" and then working our way to the right. They all have a zero in the ones but there are three numbers with a zero in the tenths. You only need to consider these three numbers to find the smallest number. I've highlighted them yellow.

- 5) Looking at the three numbers highlighted yellow, we can see that they all have different values in the hundredths column so we can find which one has the lowest value (2 is smaller than 6 & 7) and I've labelled it "1" on the right in green pen. Keep working through the list until you've found the next lowest value and so on.

ones	.	tenths	hundredths	thousandths	
0	.	6	0	0	5
0	.	0	2	6	1
0	.	1	6	0	4
0	.	0	6	0	2
0	.	0	7	9	3

This strategy will serve you well and make sure you make no mistakes when ordering decimals with a different number of digits.

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Worksheet:

Put the following sets of numbers into *ascending* order:

1. 0.5 0.4 0.2 0.7

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2. 0.57 0.29 0.14 0.48 0.26

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3. 0.67 0.09 0.7 0.28 0.81

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4. 0.065 0.059 0.02 0.06 0.046

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Put these sets of numbers into *descending* order:

5. 0.37 0.59 0.53 0.15 0.05

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6. 0.092 0.92 0.029 0.099 0.2

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And, a little bit of reasoning:

These decimal numbers are in ascending order. Put digits in the empty boxes to make the order correct.

a) 0.____0____, 0.0____, 0.03____, 0.1____, 0.____6____

Again, remember that there are plenty of Mathematics exercises relating to ordering and comparing decimals.