# Helping With Math usa 

## Comparing Decimals

## Suitable for students aged 8-10

## Key Concepts:

- Comparing numbers in mathematics is a way of determining if one number is equal, smaller or bigger than the other number.
- Understanding which is smaller, larger, or just the same plays an important role in real-life.



## COMPARING NUMBERS

## SYMBOLS USED IN COMPARING NUMBERS

| SYMBOL | MEANING | EXAMPLE |
| :---: | :--- | :---: |
| $\mathbf{=}$ | Equal sign is used to show <br> that the two numbers are <br> equal in value. | $2.35=2.35$ |
| $<$ | Less than sign is used to <br> show that one number has <br> smaller value than the other <br> number. | $1.72<3.5$ |
| $>$ | Greater than sign is used to <br> show that one number has <br> larger value than the other <br> number. | $25.67>19.28$ |

Study again the symbols we are using to compare numbers. Are they already familiar to you? Do you have any question so far? Share your thoughts below.

## ILLUSTRATIVE EXAMPLES



A PLACE VALUE CHART IS VERY USEFUL TO COMPARE DECIMALS. LOOK AT THE EXAMPLE BELOW:

## Which is greater 5.370 or 5.349 ?

|  |  |  | H | T |
| :--- | :--- | :--- | :--- | :--- |
|  |  | T | U | H |
| O |  | A | E | N |
| N | O |  |  |  |
| E | N | N | D | U |
| S | D | T | R | S |
|  |  | H | E | A |
|  |  | S | T | N |
|  |  |  | H | T |
|  |  |  |  | S |
|  |  |  | S |  |
| 5 |  | 3 | 7 | 0 |
| 5 |  |  | 3 | 4 |

## Explanation:

The ones and tenths digit are the same but the hundredths digit of 5.370 is greater than the same place value of 5.349 . Therefore, 5. $370>5.349$.

## Which one is smaller 0.195 or $0.591 ?$

| $\begin{aligned} & \mathrm{O} \\ & \mathrm{~N} \\ & \mathrm{E} \\ & \mathrm{~S} \end{aligned}$ | $\begin{aligned} & \mathbf{A} \\ & \mathbf{N} \\ & \mathbf{D} \end{aligned}$ | $\begin{aligned} & \mathrm{T} \\ & \mathrm{E} \\ & \mathrm{~N} \\ & \mathrm{~T} \\ & \mathrm{H} \\ & \mathrm{~S} \end{aligned}$ | $\begin{aligned} & \mathrm{H} \\ & \mathrm{U} \\ & \mathrm{~N} \\ & \mathrm{D} \\ & \mathrm{R} \\ & \mathrm{E} \\ & \mathrm{D} \\ & \mathrm{~T} \\ & \mathrm{H} \\ & \mathrm{~S} \end{aligned}$ | T H O U S A N N D H H S |
| :---: | :---: | :---: | :---: | :---: |
| 0 | - | 1 | 9 | 5 |
| 0 | . | 5 | 9 | 1 |

## Explanation:

The tenths digit of 0.195 is smaller than the same place value of 0.591 . Therefore, $0.195<0.591$.
 Equivalent Decimals - these are decimals having the same value. When you add zero the the right of the last digit of the decimal, its value will stay the same.

## TABLE OF ACTIVITIES

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International Day of Education is celebrated to promote the Education For All (EFA) policy. Make sure that everyone gets the education that they deserved by encircling the decimal number with the lowest value.
1.
A) 3.04
B) 2. 40
C) 3.40
D) 2.04
2.
A) 0.10
B) 0.05
C) 0.01
D) 0.50
3.
A) 5.19
B) 5.91
C) 6.19
D) 6.91
4.
A) 9.51
B) 8.53
C) 8.55
D) 9.05
5.
A) 11.11
B) 11.12
C) 12.11
D)11. 21
6.
A) 6.23
B) 6.32
C) 2.36
D) 3.26
7.
A) 3.2
B) 3.20
C) 3.02
D) 2.30
8.
A) 7.04
B) 2. 40
C) 3.40
D) 2. 04

## LET'S EDUCATE OTHERS

Let's educate others about decimals by crossing out the decimal number with the largest value.

Which has the largest value?


## THE GREATEST EDUCATOR

## A great person once said that the greatest weapon to fight poverty

 is education. Let's do that by learning decimals. Use < or > to complete the mathematical sentences.
5) 11.2
12.1
6) 3.27
3.17

1) 4.2
4.02
2) 1.9
9.1
3) 0.23 $\qquad$ 0.32
4) 0.18
0.8

## THE SMALLEST SCHOOL IN TOWN

Look for the smallest school in town by selecting the decimal with a smaller value. Encircle the number to identify your answer.


$$
\text { 9) } 1.12 \text { vs } 1.21
$$

$$
\text { 8) } 24.03 \text { vs } 24.30
$$

$$
\text { 7) } 21.6 \text { vs } 21.9
$$

6) . 08 vs .80
7) 23.04 vs 23.40

8) 19.13 vs 19.31
9) 23.04 vs 23.40


Complete your decimal portfolio by answering the questions below. Write the letter of your choice on the space before each number.

1. Which of the following decimal numbers is greater than 5.03 ?
A)5. 01
B) 5.02
C) 5.00
D) 5.04
2. Which of the following decimal numbers is less than 10.6 ?
A)11. 01 B)
10.7
C) 10.5
D) 10.8
___ 3. Which of the following decimal numbers is equal to 2.2 ?
A)2.22
B)
C) 2.00
D) 2.20
$\qquad$ 4. The following numbers are greater than 3.5 except one.
A)5. 3
B)
3. 3
C) 3.05
D) 3.51
$\qquad$ 5. The following numbers are less than 3.5 except one.
A)2. 5
B) $\quad 3.6$
C) 3.05
D) 2.05


TRIVIA: Who was considered as the "Father of Decimal"?

## THE LEARNING KIDS

Be one of the learning kids! Supply the box with desired answers per question.

1. List down four decimal numbers that are greater than 8.04 but less than 8. 40.
2. Give five decimal numbers that are greater than 0.5 but less than 0.7.
3. Enumerate eight decimal numbers that are less than or equal to 0.1 .


## SCIENCE EXPERIMENT

## Make this Science Experiment of lovely kids a success by identifying if the following statements are TRUE or FALSE.

1. Between 45.098 and 45.089 , the second decimal is closer to 0 in the number line.
$\qquad$ 2. 14.679 is closer to 15.18 compared to 14.05 .
2. Between 11.354 and 11.453 , the second decimal is closer to 0 in the number line.
3. 4.132 is closer to 8.18 compared to 4.05 .
4. Among 6.156, 6.516, and 6.615, the first decimal has the least value.

## Explanation of your answer.

1. 


2.
3.
4.
5.

## MY MATH HOMEWORK

Help Ali answer his homework. He was asked by his teacher to identify the error on the given below. Write your answer on the space provided.


Explanation:
The ones and tenths digit are the same but the hundredths digit of 9.728 is greater than the same place value of 9. 782. Therefore, 9. 728 > 9. 782.

## Your answer:

## BOOK WORMS

Ana and Emily are school best friends. One thing they love in common is reading books. Answer the following situations below using your understanding of decimal numbers.

1. According to Ana, she can read one whole fiction-themed novel in 4.185 hours. She is claiming that she is a faster reader than her older brother who can finish the same book in 4.5 hours. Is her claim valid? Explain your answer.
2. Ana and Emily had challenged themselves. They need to finish reading three books and they have to record the time they spent to finish them. The data are given below:

|  | Book 1 | Book 2 | Book 3 |
| :---: | :---: | :---: | :---: |
| Ana | 0.583 hrs | 1.937 hrs | 2.822 hrs |
| Emily | 0.499 hrs | 1.935 hrs | 2.288 hrs |

Who spent longer time to finish the three books? Explain your answer.

## JUNIOR MATHEMATICIAN

Be the Junior Mathematician of the Week by comparing the following decimals using $<,>$, or $=$.


Give at least three life scenarios where comparing decimals is important.


## ANSWER GUIDE

## Activity 1

| 1.D | 2. $C$ | 3.A |
| :--- | :--- | :--- |
| 4. B | 5.A | 6. C |
| 7.D | 8.D |  |

Activity 3

| $1 .>$ | $2 .<$ | $3 .<$ |
| :--- | :--- | :--- |
| $4 .<$ | $5 .<$ | $6 .>$ |
| $7 .<$ | $8 .<$ | $9 .<10 .<$ |

## Activity 5

1. D
2. C
3. D
4. C
5. B The Father of Decimal is Aryabhatta.

## Activity 7

## Activity 2

1. 26.8
2. 21.1
3. 0.76
4. 2.21
5. 5.9

## Activity 4

| 1. 23.04 | 2.19 .13 | 3.28 .02 |
| :--- | :--- | :--- |
| 4. 23.14 | 5.23 .04 | $6 . .08$ |
| 7. 21.6 | 8.24 .03 | 9.1 .12 |

## Activity 6

Answers may vary per learner. The possible answers may be:

1. 8. $05,8.06,8.07,8.08$
1. $0.51,0.52,0.53,0.54,0.55$
2. $0.1,0.2,0.3,0.4,0.5,0.6$, $0.7,0.8$
3. TRUE because the second decimal is less than the first one.
4. TRUE because 14.679 is greater than 14.05 .
5. FALSE because 11.453 is greater than 11.354 .
6. TRUE because 4.05 is less than 4.132.
7. TRUE, because the tenths digit of the first decimal is the lowest among the given.

## ANSWER GUIDE

## Activity 8

1. The explanation is not correct. The conclusion must be $9.728<$ 9. 782.

## Activity 9

1. Yes, her claim is valid because 4.5 hours is greater than 4.185. having that, 4.5 is a slower time than 4.185.
2. Ana spent the longer time to read the three books. Her time, which were expressed in decimals, are greater than Emily's.

## Activity 10

1. $>,=2 .<,<$
2. $<,<$
3. <, >
4. >, =

Answers may vary per learner.

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