

Name: \_\_\_\_\_

## Adding Zeros to a Decimal Number

When and where can you add zeros to decimal numbers?

If I have a decimal number like 578.34, where can I put a zero without changing the value of the number?

I can put zeros to the left of (**in front of**) the **whole part** of the number (the part that comes before the decimal point).

In the case of 578.34, this means that I can put all the zeros I want before the digit 5.

$$...0000578.34 = 578.34 \quad \text{Why?}$$

I can also put zeros to the right of (**after**) the **decimal part** of the number (the part that comes after the decimal point).

In the case of 578.34, this means that I can put all the zeros I want after the digit 4.

$$578.34 = 578.340000... \quad \text{Why?}$$

I **cannot** insert zeros between digits **or** between the decimal point and a digit on either side of the decimal point without changing the value of the number. *Why?*

I **can** add a decimal point and put a zero (or zeros) after the decimal point **if there are no other digits after the decimal point**. For example,  $79 = 79.00$

I **can** put a zero before the decimal point **if there are no other digits before the decimal point**.

Compare the following using  $\{<, >, =\}$ :

$$05.67 \quad \underline{\hspace{1cm}} \quad 5.67$$

$$5.67 \quad \underline{\hspace{1cm}} \quad 5.067$$

$$5.67 \quad \underline{\hspace{1cm}} \quad 5.670$$

$$5.67 \quad \underline{\hspace{1cm}} \quad 50.67$$

$$5 \quad \underline{\hspace{1cm}} \quad 5.0$$

$$368.00 \quad \underline{\hspace{1cm}} \quad 368$$

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Compare using  $\{<, >, =\}$ :

$0.5 \text{ \_\_\_\_\_\_ } .51$

$.06 \text{ \_\_\_\_\_\_ } .10$

$8.1 \text{ \_\_\_\_\_\_ } 8.09$

$1.01 \text{ \_\_\_\_\_\_ } 0.99$

$.22 \text{ \_\_\_\_\_\_ } .2 + .02$

$4/5 \text{ \_\_\_\_\_\_ } .8$

$.25 \text{ \_\_\_\_\_\_ } 1/4$

$.50 \text{ \_\_\_\_\_\_ } 1/2$

$3/4 \text{ \_\_\_\_\_\_ } .75$

$1/2 \text{ \_\_\_\_\_\_ } .49$

$1.09 \text{ \_\_\_\_\_\_ } 1.1$

$1\frac{1}{2} \text{ \_\_\_\_\_\_ } 1.50$

$1.6 \text{ \_\_\_\_\_\_ } 1.60$

$1.03 \text{ \_\_\_\_\_\_ } 1\frac{3}{100}$

$.2 \text{ \_\_\_\_\_\_ } .200$

$7/100 \text{ \_\_\_\_\_\_ } .700$

$9/10 \text{ \_\_\_\_\_\_ } .90$

$8.0 \text{ \_\_\_\_\_\_ } 8.00$

$7 \text{ \_\_\_\_\_\_ } 7.000$

$0.4 \text{ \_\_\_\_\_\_ } .40$

$1.0 \text{ \_\_\_\_\_\_ } 0.1$