Operations With Scientific Notation: Guided Notes

# Multiplying Numbers in Scientific Notation

**Step 1)** Multiply the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Step 2)** \_\_\_\_\_\_\_\_ the exponents.

**Step 3)** Rewrite the result in scientific notation.  
 *Remember the number before the decimal point should be \_\_\_\_\_\_\_.*

|  |  |
| --- | --- |
| **Example** |  |
| **Step 1)** |  |
| **Step 2)** |  |
| **Step 3)** | Is \_\_\_\_\_\_\_\_\_\_\_\_\_ written in scientific notation? Why or why not? |

# Rewriting Numbers in Scientific Notation

**Step 1)** Move the decimal in the number so there is only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ before it.

**Step 2)** Count the number of places and note \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ you moved the decimal.

**Step 3)** Change the exponent:

* If you moved the decimal \_\_\_\_\_\_\_, add the number of places to the exponent.
* If you moved the decimal \_\_\_\_\_\_\_\_, subtract the number of places from the exponent.

How could we write \_\_\_\_\_\_\_\_\_\_\_\_\_ in scientific notation?

# Examples

Write each product in scientific notation. Round each answer to two decimal places.

|  |  |
| --- | --- |
| **(a)** | **(b)** |
| **(c)** | **(d)** |

# Dividing Numbers in Scientific Notation

**Step 1)** Divide the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Step 2)** \_\_\_\_\_\_\_\_\_\_\_ the exponents.

**Step 3)** Rewrite the result in scientific notation.

# Examples

Write each quotient in scientific notation. Round each answer to two decimal places.

|  |  |
| --- | --- |
| **(a)** | **(b)** |
| **(c)** | **(d)** |