

Scientific Notation

Rules:

- 1) One digit in front of decimal 2) write $\times 10$ 3) If <1 then - exponent, If >1 then + exponent.

Put the following numbers into scientific notation:

- | | | | |
|---------------|---|------------|--|
| 1) 623 | <u>6.23×10^2</u> | 5) 4001 | <u>4.001×10^3</u> |
| 2) 0.005 | <u>5×10^{-3}</u> | 6) 0.00025 | <u>2.5×10^{-4}</u> |
| 3) 0.0404 | <u>4.04×10^{-2}</u> | 7) 56702 | <u>5.6702×10^4</u> |
| 4) 90,000,000 | <u>9×10^7</u> | 8) 0.3 | <u>3×10^{-1}</u> |

Take the following numbers out of scientific notation:

- | | | | |
|---------------------------|----------------|---------------------------|--------------------|
| 9) 2.4×10^3 | <u>2400</u> | 13) 4.30×10^{-4} | <u>0.000430</u> |
| 10) 3.01×10^{-3} | <u>0.00301</u> | 14) 5.00×10^7 | <u>50,000,000</u> |
| 11) 8.20×10^4 | <u>82,000</u> | 15) 1.43×10^{-5} | <u>0.0000143</u> |
| 12) 5.43×10^{-2} | <u>0.0543</u> | 16) 2.09×10^8 | <u>209,000,000</u> |

Qualitative & Quantitative Data

- 17) The candle smells like apple cinnamon.
 18) The candle contains 3 tsp of vanilla scented oil.
 19) The lamp uses 60 watts of electricity.
 20) I use neon bulbs in my lamp.

- (circle)
- | | |
|-------------|--------------|
| Qualitative | Quantitative |
| Qualitative | Quantitative |
| Qualitative | Quantitative |
| Qualitative | Quantitative |

Percent error

Brittany conducted a density experiment with three trials to determine the density of copper. She her density results were: 7.49 g/mL, 7.51 g/mL, and 7.48 g/mL. The theoretical density of copper is 8.92 g/mL. What is the percent error of Brittany's average density?

*find the average first
 - 16.0%*

Accuracy & Precision The mass of a rock was measured on three different balances. The results are shown below. Determine if each balance showed precision and accuracy. Indicate by writing yes or no in the box.

True mass of rock: 5.4 g	Balance 1	Balance 2	Balance 3
	6.1 g	3.3 g	5.2 g
	5.0 g	3.1 g	5.5 g
	4.7 g	3.2 g	5.3 g
precise?:	no	yes	yes
accurate?:	no	no	yes

although 5.0g by itself is fairly accurate