

ENGINEERING NOTATION

WHAT IS SCIENTIFIC NOTATION?



- “Scientific Notation” or “Standard Form” is a way of writing numbers in a compact form.


A number written in Scientific Notation is expressed as a number from 1 to less than 10 multiplied by a power of 10

$$A \times 10^b$$

SCIENTIFIC AND ENGINEERING NOTATION

- In Scientific notation you want to have one significant Digit before the decimal point.

4869
4869.  Implied decimal point
4869.

4.869 x 10³

2700000.00
2700000.00
2700000.00

2.70 x 10⁶

SCIENTIFIC AND ENGINEERING NOTATION

.00548

.00548



5.48×10^{-3}

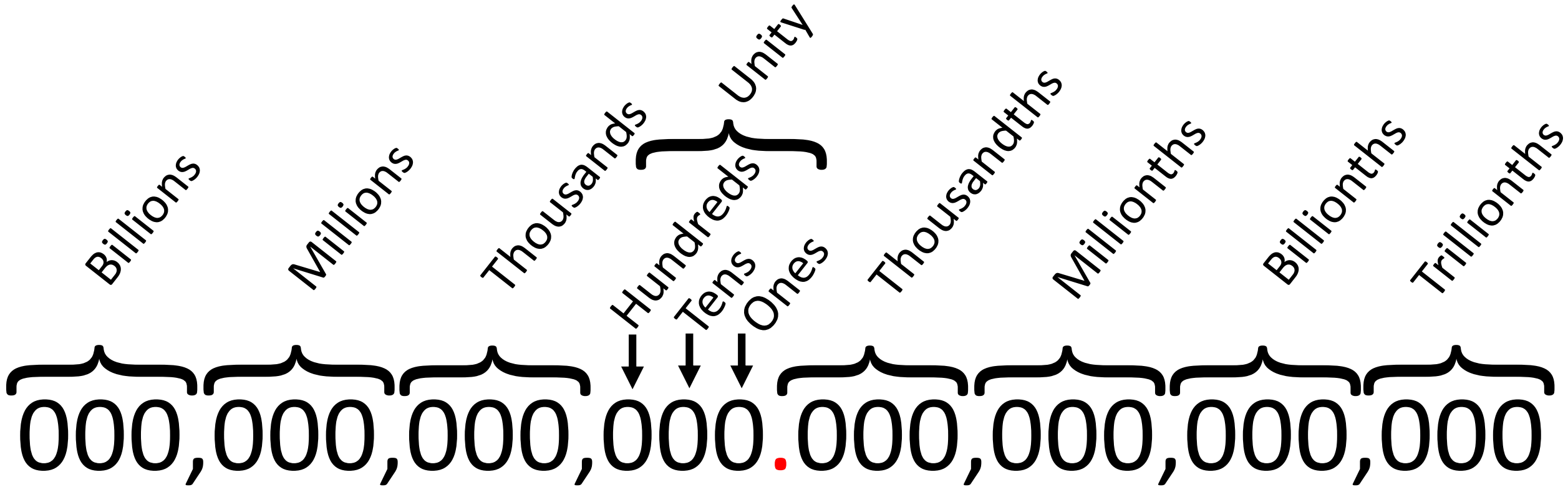
.00000527

.00000527



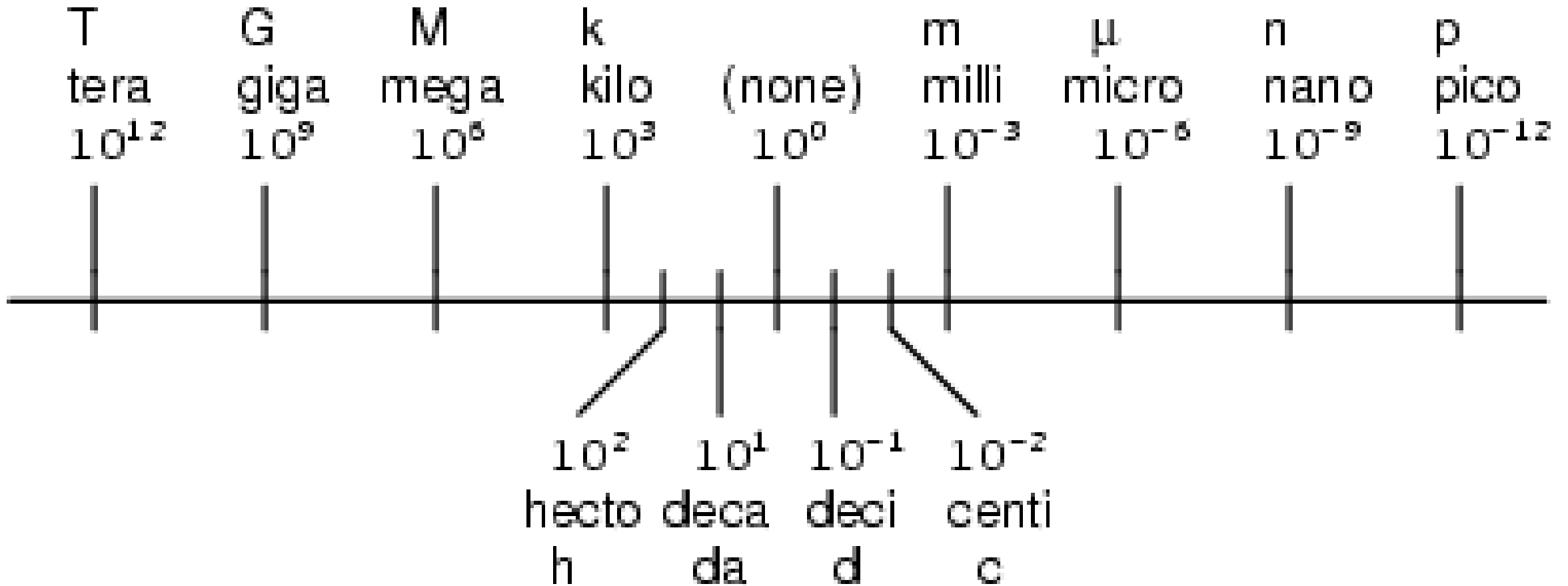
5.27×10^{-6}

SCIENTIFIC NOTATION

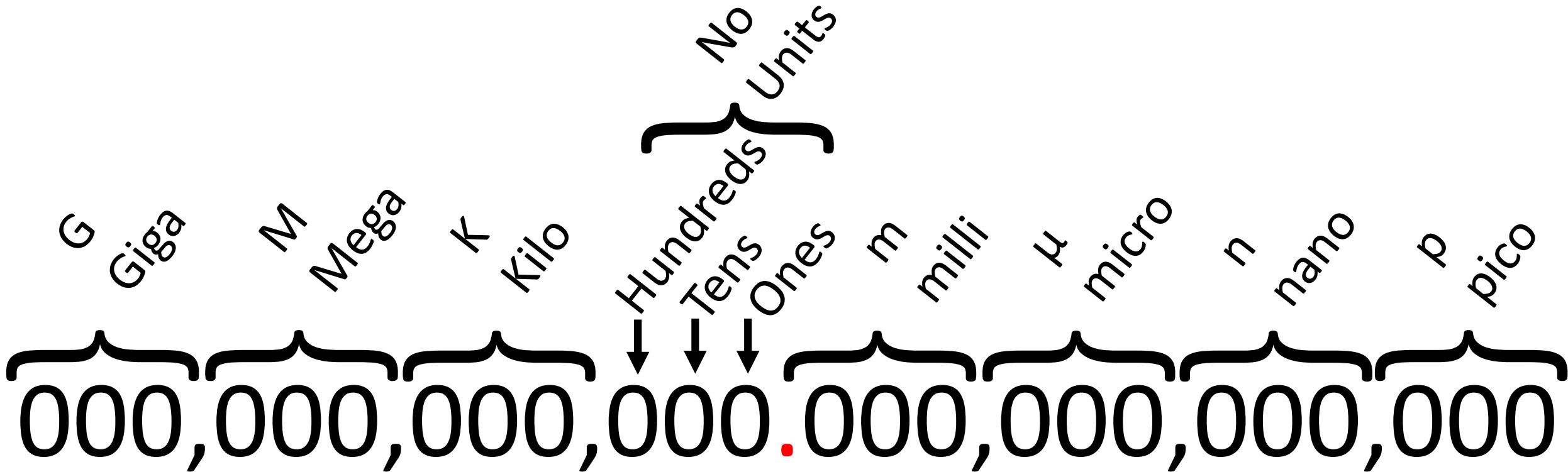


METRIC NOTATION

METRIC PREFIX SCALE





METRIC NOTATION



SCIENTIFIC AND ENGINEERING NOTATION WITH A ELECTRICAL TWIST...

- Solve for Scientific notation, but to the nearest unit divisible by 3

4869 Ω

4869
4869.  Implied decimal point
4869.

4.869 x 10³
4.869 K Ω

SCIENTIFIC AND ENGINEERING NOTATION WITH A ELECTRICAL TWIST...

- Solve for Scientific notation, but to the nearest unit divisible by 3

2700000.00

2700000.00

2700000.00

2700000.00


2.70 x 10⁶

2.70 M

LET'S TRY SOME...

456,000,000

0.00675

30,900

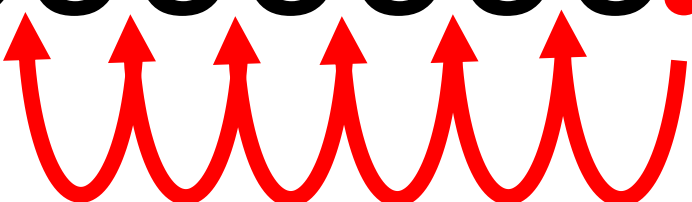
0.00712

1,340,000,000

0.00000000236

LET'S TRY SOME...

456,000,000

456000000. 

= 456M
M?

456MΩ

LET'S TRY SOME...

0.00675

0.00675



= 6.75m
m?

6.75mA

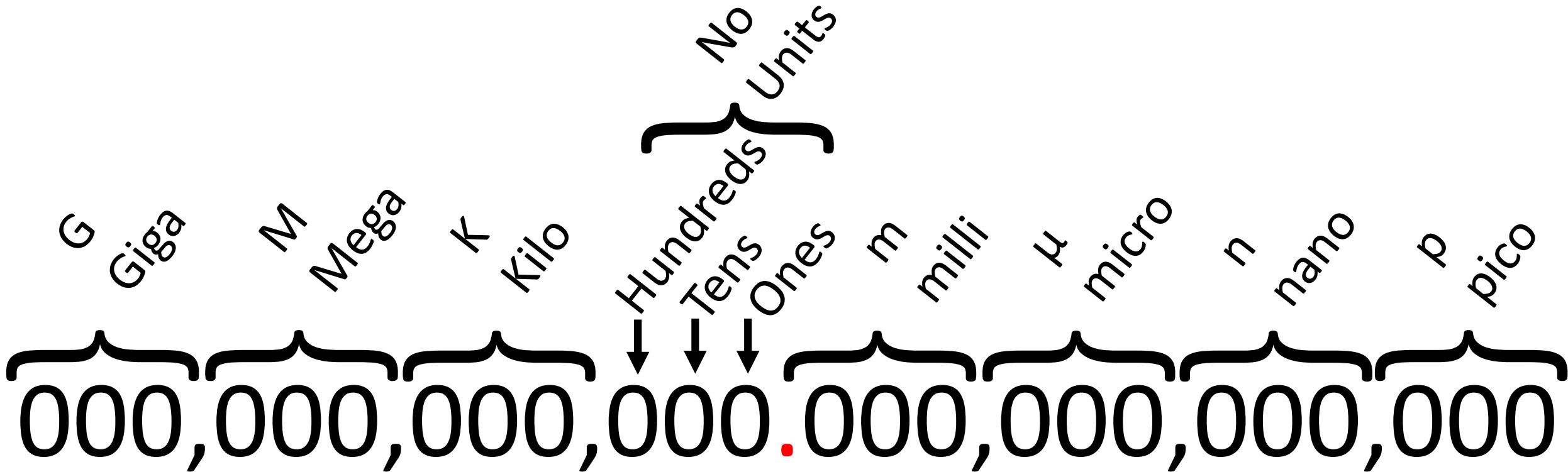
LAB TIME...

245800000

.0000000456

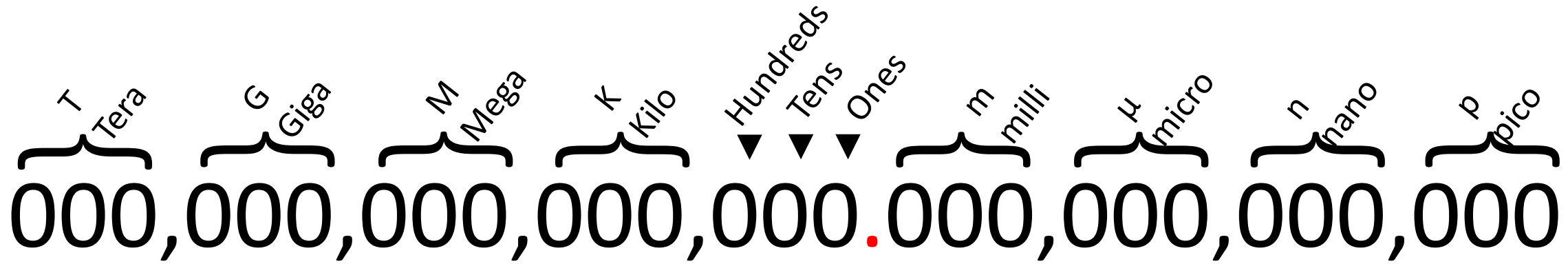
Jim Burnham

METRIC NOTATION



ENGINEERING NOTATION

Name: _____ AM/PM



65700000 V

_____ 65.7×10^6

_____ 65.7 MV

0.0033 A

_____ $\times 10$ —

_____ _____ A

47000 Ω

_____ $\times 10$ —

_____ _____ Ω

0.00712 A

_____ $\times 10$ —

_____ _____ A

1,340,000,000 Ω

_____ $\times 10$ —

_____ _____ Ω

0.00000000236 f

_____ $\times 10$ —

_____ _____ f

REFERENCE

SOURCES

- <https://www.allaboutcircuits.com/textbook/direct-current/chpt-4/metric-notation/>
- <https://www.youtube.com/watch?v=7iGAa0BVS9I>
- <https://www.youtube.com/watch?v=AKRty0d9XnM>
- <https://www.youtube.com/watch?v=4-GhZD4F0xl>
- <https://www.youtube.com/watch?v=RFrdAGMnDYw>
- <https://www.youtube.com/watch?v=9GbCrC7OiVw>