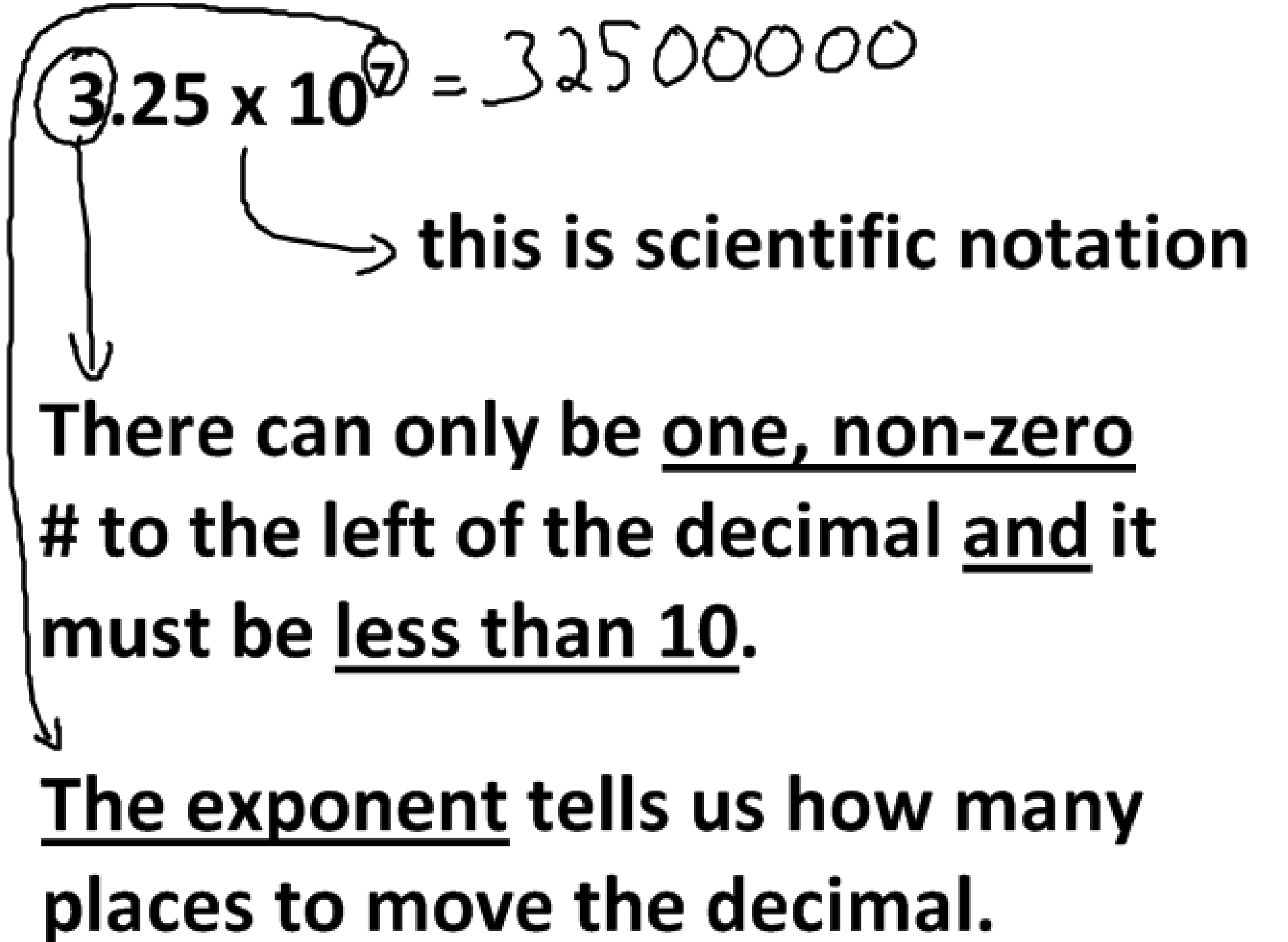


# **Section E-2: Scientific Notation**

## **Objectives:**

- **Tell why scientists use scientific notation.**
- **Convert between standard form and scientific notation.**


$$3.25 \times 10^7 = 32500000$$

**this is scientific notation**

**There can only be one, non-zero # to the left of the decimal and it must be less than 10.**

**The exponent tells us how many places to move the decimal.**

**\*\*Positive Exponents**

make **BIG #'s**

**\*\*Negative Exponents**

make small #'s

## Scientific Notation to Standard Form

Ex 1:  $2.24 \times 10^4 = 22400$

2.2400  
~~~~~

Ex 2:  $1.35 \times 10^{-6} = 0.00000135$

.000001.35  
~~~~~

Ex 3:  $3.14159 \times 10^3$

3141.59

Ex 4:  $0.003.14159 \times 10^{-3}$

0.00314159

## Standard Form to Scientific Notation

Ex 5:  $324 = 3.24 \times 10^2$

Ex 6:  $0.0049 = 4.9 \times 10^{-3}$

Ex 7:  $0.36 = 3.6 \times 10^{-1}$