

# Scientific Notation

Earth is about 628,000,000,000,000 miles from Jupiter!

wow →  $628\,000\,000\,000\,000 = 6.28 \times 10^{14}$

↓  
standard form
↓  
Scientific Notation

	standard form	Scientific Notation
Positive	$6.40\,000\,000$ $6.4 \times 10^8$	① add decimal after first digit ② Box + Drop ③ × base 10 ④ count spaces
Negative	$0.00032$ $3.2 \times 10^{-4}$	

make bigger →

$4.32 \times 10^7$   
 $4.32$   
 432000,000

- ① Bring down
- ② move decimal
  - + →
  - ←
- ③ fill in 0's
- ④ Rewrite

← make smaller

$4.32 \times 10^{-7}$   
 $4.32$   
 0.000000432