

# 6:04 | Scientific Notation

Name: \_\_\_\_\_ Class: \_\_\_\_\_

## Examples



- For scientific notation, write a number between 1 and 10 times a power of 10.
- Each power of 10 moves the decimal 1 place.
- Negative powers move the decimal to the left. Positive powers move it to the right.

### 1 Evaluate.

a  $9 \times 10^3$   
 $= 9 \times 1000$   
 $= 9000$

b  $9 \times 10^{-2}$   
 $= 9 \div 100$   
 $= 0.09$

### 2 Write in scientific notation.

a 16 000  
 $= 1.6 \times 10\ 000$   
 $= 1.6 \times 10^4$

b 0.0016  
 $= 1.6 \div 1000$   
 $= 1.6 \times 10^{-3}$

## Exercise

### 1 Evaluate.

a  $6 \times 10^1$

b  $6 \times 10^2$

c  $6 \times 10^3$

d  $6 \times 10^{-2}$

e  $4 \times 10^{-1}$

f  $4 \times 10^{-4}$

g  $8 \times 10^4$

h  $8 \times 10^{-3}$

i  $2.5 \times 10^2$

j  $2.5 \times 10^5$

k  $2.5 \times 10^{-2}$

l  $3.6 \times 10^1$

m  $9.3 \times 10^3$

n  $9.3 \times 10^{-2}$

o  $8.1 \times 10^{-1}$

p  $7 \times 10^6$

q  $3.04 \times 10^3$

r  $3.04 \times 10^2$

s  $5.4 \times 10^{-2}$

t  $8.32 \times 10^5$

### 2 Write in scientific notation.

a 430

b 4300

c 43 000

d 900

e 8200

f 30 000

g 0.6

h 0.006

i 0.27

j 0.04

k 0.0008

l 5000

m 68

n 30

o 0.075

p 0.00032

q 20 000

r 0.02

s 1750

t 123 000

## Fun Spot 6:04 | How did the dingbat break his arm while raking leaves?



Evaluate each expression. Match the letters with the answers below.

E  $3 \times 10^{-2}$

F  $4.1 \times 10^3$

H  $1.4 \times 10^2$

L  $3 \times 10^3$

O  $4.1 \times 10^2$

R  $1.4 \times 10^{-1}$

T  $1.4 \times 10^4$

U  $3 \times 10^1$

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140 0.03

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4100 0.03 3000 3000

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410 30 14 000

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410 4100

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14 000 140 0.03

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14 000 0.14 0.03 0.03

