

# Lecture 3

Monday, September 9, 2024 4:23 AM

\* Decimal number:

123.4567: 1 hundred 2 tens 3 ones 4 tenths 5 hundredths  
6 thousandths 7 ten thousandths

The place value of 3 is 3 ones.

The place value of 6 is 6 thousandths.

\* Scientific notation:

$$a = \bar{a} \times 10^e$$

where  $1 \leq \bar{a} < 10$  is called the significant or mantissa,

$e$  is an integer (can be positive, 0, or negative)

Ex

$$5030000 = 5.03 \times 10^6$$

↑  
regular notation

↑  
scientific notation

\* Multiplication and division

$$(\bar{a} \times 10^e) \times (\bar{b} \times 10^f) = \bar{a}\bar{b} \times 10^{e+f}$$

$$\frac{\bar{a} \times 10^e}{\bar{b} \times 10^f} = \frac{\bar{a}}{\bar{b}} 10^{e-f}$$

Work on some problems on the worksheet