# 8.4 Scientific Notation

A number is written in
Scientific notation if:

$c \times 10^n$

where c is a number between
1 and 10 and n is an exponent

## Ex-1 Rewrite in decimal form.

a) $2.834 \times 10^2 = 283.4$

b) $3.76 \times 10^1 = 37.6$

c) $4.683 \times 10^{-3} = .004683$

d) $2.76 \times 10^0 = 2.76$

## Ex-2 Rewrite in S. N.

a. $34,690 = 3.469 \times 10^4$

b. $1.78 = 1.78 \times 10^0$

c. $.039 = 3.9 \times 10^{-2}$

d. $.007007 = 7.007 \times 10^{-3}$

# Ex. 3 Evaluate.

a. $(1.4 \times 10^4)(7.6 \times 10^3)$

$(1.4)(7.6) = 10.64$ $1.064 \times 10^1$

$10^4 \cdot 10^3 = 10^7$

$1.064 \times 10^8$

b. $(1.2 \times 10^{-1}) \div (4.8 \times 10^{-4})$

$1.2 \div 4.8 = .25 = 2.5 \times 10^{-1}$

$\frac{10^{-1}}{10^{-4}} = -1-(-4) = 3 = 10^3$

$2.5 \times 10^2$

c. $(4.0 \times 10^{-2})^{-3}$

$4^{-3} \times 10^6$ $.015625 \times 10^6$

$1.5625 \times 10^{-2} \times 10^6$

$1.5625 \times 10^4$