

## 2.10 Operations Using Numbers in Scientific Notation

**Class Notes** – Simplify and express your answer in scientific notation.

LP#1 $(7 \times 10^4) \times (3 \times 10^5) =$	$(4 \times 10^2) \times (8 \times 10^7) =$
LP#2 $(6.23 \times 10^5) \times (9.76 \times 10^3) =$	$(2.38 \times 10^{11}) \times (1.99 \times 10^{10}) =$
LP#3 $(2 \times 10^{10}) \div (8 \times 10^7) =$	$(1 \times 10^{14}) \div (4 \times 10^8) =$
LP#4 $(3.92 \times 10^7) \div (1.12 \times 10^{11}) =$	$(8.04 \times 10^4) \div (2.01 \times 10^{13}) =$
LP#5 $(0.00000072) \div (2.88 \times 10^5) =$	$(6,390,000,000) \times (4.26 \times 10^7) =$

For LP#1 and LP#2, can we use the distributive property to perform the multiplication between the two sets of parenthesis? Explain.

**Review** – Simplify and express your answer in scientific notation.

R#1 $(5 \times 10^3) \times (1 \times 10^2) =$	$(6 \times 10^9) \div (3 \times 10^5) =$
R#2 $(9 \times 10^6) \times (5 \times 10^7) =$	$(7 \times 10^{17}) \div (2 \times 10^9) =$

R#3 $(4 \times 10^1) \times (6 \times 10^8) =$	$(9 \times 10^2) \div (4 \times 10^6) =$
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**Homework** – Simplify and express your answer in scientific notation.

1)  $(2 \times 10^3) \times (9 \times 10^4) =$       2)  $(4 \times 10^5) \times (2 \times 10^7) =$       3)  $(6 \times 10^7) \times (4 \times 10^9) =$

4)  $(3 \times 10^4) \times (4 \times 10^6) =$       5)  $(5 \times 10^6) \times (6 \times 10^8) =$       6)  $(8 \times 10^5) \times (2 \times 10^6) =$

7)  $(5 \times 10^{12}) \times (1 \times 10^{13}) =$       8)  $(8 \times 10^7) \times (4 \times 10^2) =$       9)  $(6 \times 10^2) \times (7 \times 10^8) =$

10)  $(9 \times 10^8) \div (8 \times 10^3) =$       11)  $(8 \times 10^9) \div (2 \times 10^3) =$       12)  $(7 \times 10^{12}) \div (4 \times 10^8) =$

13)  $(6 \times 10^7) \div (3 \times 10^6) =$       14)  $(5 \times 10^{15}) \div (8 \times 10^6) =$       15)  $(3 \times 10^7) \div (4 \times 10^2) =$

16)  $(5 \times 10^{11}) \div (4 \times 10^4) =$       17)  $(3 \times 10^8) \div (8 \times 10^{10}) =$       18)  $(8 \times 10^{16}) \div (4 \times 10^9) =$