

HW # 16

Perform the indicated operation. All final answers must be written in proper scientific notation form.

1) $(1.2 \times 10^4)(5 \times 10^8)$

$$(1.2 \times 5)(10^4 \times 10^8) \quad 4 + 8 = 12$$

$$6 \times 10^{12}$$

2) $(3.2 \times 10^{-5})(2.1 \times 10^{-6})$

$$(3.2 \times 2.1)(10^{-5} \times 10^{-6}) \quad -5 + (-6) = -11$$

$$6.72 \times 10^{-11}$$

3) $(12,000,000,000)(0.0000009)$

$$(1.2 \times 10^{10})(9 \times 10^{-7})$$

$$(1.2 \times 9)(10^{10} \times 10^{-7}) \quad 10 + (-7) = 3$$

$$10.8 \times 10^3$$

$$(1.08 \times 10^1) \times 10^3 \quad 1 + 3 = 4$$

$$1.08 \times 10^4$$

4) $\frac{1.44 \times 10^{-5}}{1.2 \times 10^3}$ $-5 - 3 \rightarrow -5 + (-3) = -8$

$$1.2 \times 10^{-8}$$

5) $\frac{6.4 \times 10^7}{8 \times 10^{-2}}$ $7 - (-2) \rightarrow 7 + 2 = 9$

$$0.8 \times 10^9$$

$$(8 \times 10^{-1}) \times 10^9 \quad -1 + 9 = 8$$

$$8 \times 10^8$$

6) $(7,500,000,000) \div (0.0000015)$

$$\frac{7.5 \times 10^9}{1.5 \times 10^{-6}} \quad 9 - (-6) \rightarrow 9 + 6 = 15$$

$$5 \times 10^{15}$$