

NOTES: Scientific notation

9,020,300,000,000

9.020300000000. $\times 10^0$

9.0203 $\times 10^{12}$

move Lt \rightarrow exp add to ^{exp} Exp #

.0000342

.0000342 $\times 10^0$

3.42 $\times 10^{-5}$

move Rt then sub exp #

MULT:

$(5 \times 10^{10})(3 \times 10^5)$

$(5 \times 10^{10})(3 \times 10^5)$

$(5 \times 3)(10^{10} \times 10^5)$

15×10^{15}

15×10^{15}

$1.5 \times 10^{15+1}$

(1.5×10^{16})

hop Lt

add to exponent

DIVISION

$$\frac{7.2 \times 10^3}{103.6 \times 10^5}$$

$$\div \left[\frac{7.2 \times 10^3}{103.6 \times 10^5} \right] \text{ - exp}$$

$$.0695 \times 10^{3-5}$$

$$.0695 \times 10^{-2}$$

$$6.95 \times 10^{-2-2}$$

$$\boxed{6.95 \times 10^{-4}}$$

hop Rt
Subt to exponent

Assignment

Simplify. Write each answer in scientific notation.

9) $(5.8 \times 10^0)(1.25 \times 10^{-2})$

10) $(3 \times 10^3)(7 \times 10^1)$

11) $(1.39 \times 10^{-3})(8.25 \times 10^1)$

12) $(5 \times 10^2)(1.45 \times 10^{-3})$

13) $(8 \times 10^{-6})(5.65 \times 10^1)$

14) $(9.26 \times 10^6)(5.9 \times 10^3)$

15) $\frac{1.6 \times 10^1}{5 \times 10^{-3}}$

16) $\frac{1.2 \times 10^0}{9.9 \times 10^1}$

17) $\frac{3.9 \times 10^{-3}}{1.6 \times 10^{-1}}$

18) $\frac{1.53 \times 10^2}{2.05 \times 10^3}$

19) $\frac{5 \times 10^6}{6.4 \times 10^4}$

20) $\frac{8 \times 10^0}{9.84 \times 10^{-3}}$

Simplify. Write each answer in scientific notation.

9) $(5.8 \times 10^0)(1.25 \times 10^{-2})$

7.25×10^{-2}

10) $(3 \times 10^3)(7 \times 10^1)$

2.1×10^5

11) $(1.39 \times 10^{-3})(8.25 \times 10^1)$

1.147×10^{-1}

12) $(5 \times 10^2)(1.45 \times 10^{-3})$

7.25×10^{-1}

13) $(8 \times 10^{-6})(5.65 \times 10^1)$

4.52×10^{-4}

14) $(9.26 \times 10^6)(5.9 \times 10^3)$

5.463×10^{10}

15) $\frac{1.6 \times 10^1}{5 \times 10^{-3}}$

3.2×10^3

16) $\frac{1.2 \times 10^0}{9.9 \times 10^1}$

1.212×10^{-2}

17) $\frac{3.9 \times 10^{-3}}{1.6 \times 10^{-1}}$

2.438×10^{-2}

18) $\frac{1.53 \times 10^2}{2.05 \times 10^3}$

7.463×10^{-2}

19) $\frac{5 \times 10^6}{6.4 \times 10^4}$

7.813×10^1

20) $\frac{8 \times 10^0}{9.84 \times 10^{-3}}$

8.13×10^2