

Scientific Notation ($\times/\div$) Practice

Name: _____

Date: _____

Question 1

Solve

I. $(3.1 \times 10^5) \cdot (4.5 \times 10^{-3}) =$

V. $\frac{1.395 \times 10^3}{4.5 \times 10^{-3}} =$

II. $(7.1 \times 10^{-7}) \cdot (8.6 \times 10^{-5}) =$

VI. $\frac{6.106 \times 10^{-11}}{8.6 \times 10^{-5}} =$

III. $(4.1 \times 10^2) \cdot (1.1 \times 10^5) =$

VII. $\frac{4.51 \times 10^7}{4.1 \times 10^2} =$

IV. $(2.1 \times 10^{-9}) \cdot (2.1 \times 10^{-9}) =$

VIII. $\frac{4.41 \times 10^{-18}}{2.1 \times 10^{-9}} =$

Scientific Notation (×/÷) Practice

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Question 1

Solve

I. $(3.1 \times 10^5) \cdot (4.5 \times 10^{-3}) = 1.395 \times 10^3$

$$(3.1 \times 10^5) \cdot (4.5 \times 10^{-3}) \rightarrow 13.95 \times 10^{5 + -3}$$

product rule
↓

$$1.395 \times 10^3 \leftarrow 13.95 \times 10^2$$

convert to scientific notation

II. $(7.1 \times 10^{-7}) \cdot (8.6 \times 10^{-5}) = 6.106 \times 10^{-11}$

$$(7.1 \times 10^{-7}) \cdot (8.6 \times 10^{-5}) \rightarrow 61.06 \times 10^{-7 + -5}$$

product rule
↓

$$6.106 \times 10^{-11} \leftarrow 61.06 \times 10^{-12}$$

convert to scientific notation

III. $(4.1 \times 10^2) \cdot (1.1 \times 10^5) = 4.51 \times 10^7$

$$(4.1 \times 10^2) \cdot (1.1 \times 10^5) \rightarrow 4.51 \times 10^{2 + 5}$$

product rule
↓

$$4.51 \times 10^7$$

IV. $(2.1 \times 10^{-9}) \cdot (2.1 \times 10^{-9}) = 4.41 \times 10^{-18}$

$$(2.1 \times 10^{-9}) \cdot (2.1 \times 10^{-9}) \rightarrow 4.41 \times 10^{-9 + -9}$$

product rule
↓

$$4.41 \times 10^{-18}$$

V. $\frac{1.395 \times 10^3}{4.5 \times 10^{-3}} = 3.1 \times 10^5$

$$\frac{1.395 \times 10^3}{4.5 \times 10^{-3}} \rightarrow 0.31 \times 10^{3 - -3} \rightarrow 0.31 \times 10^6$$

quotient rule
↓

$$3.1 \times 10^5$$

convert to scientific notation

VI. $\frac{6.106 \times 10^{-11}}{8.6 \times 10^{-5}} = 7.1 \times 10^{-7}$

$$\frac{6.106 \times 10^{-11}}{8.6 \times 10^{-5}} \rightarrow 0.71 \times 10^{-11 - -5} \rightarrow 0.71 \times 10^{-6}$$

quotient rule
↓

$$7.1 \times 10^{-7}$$

convert to scientific notation

VII. $\frac{4.51 \times 10^7}{4.1 \times 10^2} = 1.1 \times 10^5$

$$\frac{4.51 \times 10^7}{4.1 \times 10^2} \rightarrow 1.1 \times 10^{7 - 2} \rightarrow 1.1 \times 10^5$$

quotient rule

VIII. $\frac{4.41 \times 10^{-18}}{2.1 \times 10^{-9}} = 2.1 \times 10^{-9}$

$$\frac{4.41 \times 10^{-18}}{2.1 \times 10^{-9}} \rightarrow 2.1 \times 10^{-18 - -9} \rightarrow 2.1 \times 10^{-9}$$

quotient rule