

MULTIPLYING AND DIVIDING WITH SCIENTIFIC NOTATION

MULTIPLYING WITH SCIENTIFIC NOTATION

To multiply values in scientific notation, rearrange the multiplication problem and apply the properties of exponents.

$$(4.5 \times 10^5)(2 \times 10^3)$$
$$(\underline{\hspace{2cm}})(\underline{\hspace{2cm}})$$

Find each product and record your solutions in scientific notation.

1. $(1.5 \times 10^{-5})(5 \times 10^{-3})$

2. $(3 \times 10^4)(7.2 \times 10^2)$

3. $(2.2 \times 10^{-2})(8.5 \times 10^6)$

DIVIDING WITH SCIENTIFIC NOTATION

To divide values in scientific notation, rearrange the division problem and apply the properties of exponents.

$$\frac{8 \times 10^6}{4 \times 10^3}$$

$$(\underline{\hspace{2cm}})(\underline{\hspace{2cm}})$$

Find each quotient and record your solutions in scientific notation.

4. $\frac{9 \times 10^9}{3 \times 10^7}$

5. $\frac{9.45 \times 10^7}{2.1 \times 10^2}$

6. $\frac{5 \times 10^{-5}}{10 \times 10^{-2}}$

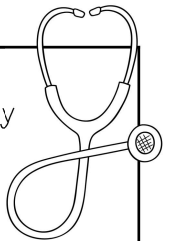
In 7-10, find each product or quotient. Record solutions in scientific and standard notation.

<p>7.</p> $(0.000012)(6 \times 10^{-2})$ <p>Scientific: _____</p> <p>Standard: _____</p>	<p>8.</p> $(7.3 \times 10^{-1})(0.004)$ <p>Scientific: _____</p> <p>Standard: _____</p>
<p>9.</p> $\frac{6 \times 10^{-3}}{0.00003}$ <p>Scientific: _____</p> <p>Standard: _____</p>	<p>10.</p> $\frac{96,000}{1.2 \times 10^{-1}}$ <p>Scientific: _____</p> <p>Standard: _____</p>

Apply your knowledge of operations with scientific notation to answer 11-12.

11. A top NBA player can earn about 2.5×10^7 dollars each year. If John earns \$40,000 per year at his starting job out of college, how many times greater is the NBA player's salary?

12. If Kelly's heart beats an average of 1×10^2 times per minute, about how many times does Kelly's heart beat in a year? (Hint: 1 year is 525,600 minutes.)



Scientific: _____

Standard: _____

Scientific: _____

Standard: _____

Summarize today's lesson: