Use of Exponents to Express Small Numbers in Standard Form

A. Choose the Correct Answer:

1. 0.00056 in standard form is:

a) 5.6×10^{-3} b) 5.6×10^{-4}

c) 5.6×10^{3} d) 56×10^{-3}

2. 3.2×10^{-2} in usual form is:

a) 0.032 b) 0.0032

c) 0.32 d) 3.2

3. Which of the following is the correct standard form of 0.0000071?

a) 7.1×10^{-5} b) 71×10^{-7}

c) 7.1×10^{-6} d) 0.71×10^{-5}

4. 4.5×10^{-3} equals:

a) 0.045 b) 0.0045

c) 0.00045 d) 0.45

5. In standard form, the number 0.005 is written as:

a) 5×10^{-2} b) 5×10^{-3}

c) 5×10^{2} d) 5×10^{3}

B. Write the Missing Terms to Complete the Sentences:

1. Standard form of 0.00081 is _____ $\times 10^{-4}$
2. 6.2×10^{-3} in decimal form is _____
3. Standard form is used to express _____ numbers in simpler way
4. The decimal point is moved to the _____ for negative exponents
5. 0.0000004 is written in standard form as _____ $\times 10^{-7}$

C. Figure out the answers to these questions:

1. Write 0.00032 in standard form.
2. Express 0.0075 in standard form.
3. Convert 8.5×10^{-3} into usual form.
4. Express 0.00000021 in standard form.
5. Write the usual form of 6.4×10^{-5}.

D. Mark each sentence with a True (✓) or False (✗):

1. In standard form, a number is written as $a \times 10^n$ where $1 \leq a < 10$. _____
2. $3.6 \times 10^{-4} = 0.00036$. _____
3. Standard form is useful for writing very small or very large numbers. _____
4. 7.5×10^{-2} is greater than 7.5×10^{-3}. _____
5. 0.00089 is written as 8.9×10^{-4} in standard form. _____

E. Challenge yourself with these questions:

1. Write 0.0000065 in standard form.
2. Express 2.47×10^{-3} in decimal form.
3. Convert 0.00000082 into standard form.
4. Write 5.9×10^{-5} in usual form.
5. Write 0.00041 in standard form.