# Scientific Notation Test (5 points each question)          Your Score_____

## Write these numbers in Scientific Notation:

**1)**                                        **2,684**
A.   Write the number with the **first non-zero digit** as the **unit**; then add a decimal point, and then either a zero or the rest of the digits until the last non-zero digit.
B.   Put your pencil point on the original number, where the decimal point would go (after the first non-zero digit).
C.   Count to the left or right each place value until you get to the original decimal point or to the end of the number.
D.   If you counted to the right, the power of ten is positive. If you counted to the left, the power of ten is negative.

**2)**                                       **0.000762**
A.   Write the number with the **first non-zero digit** as the **unit**; then add a decimal point, and then either a zero or the rest of the digits until the last non-zero digit.
B.   Put your pencil point on the original number, where the decimal point would go (after the first non-zero digit).
C.   Count to the left or right each place value until you get to the original decimal point or to the end of the number.
D.   If you counted to the right, the power of ten is positive. If you counted to the left, the power of ten is negative.

**3)**                                        **589.35**
A.   Write the number with the **first non-zero digit** as the **unit**; then add a decimal point, and then either a zero or the rest of the digits until the last non-zero digit.
B.   Put your pencil point on the original number, where the decimal point would go (after the first non-zero digit).
C.   Count to the left or right each place value until you get to the original decimal point or to the end of the number.
D.   If you counted to the right, the power of ten is positive. If you counted to the left, the power of ten is negative.

**4)**                                        **8.75**
A.   Write the number with the **first non-zero digit** as the **unit**; then add a decimal point, and then either a zero or the rest of the digits until the last non-zero digit.
B.   Put your pencil point on the original number, where the decimal point would go (after the first non-zero digit).
C.   Count to the left or right each place value until you get to the original decimal point or to the end of the number.
D.   If you counted to the right, the power of ten is positive. If you counted to the left, the power of ten is negative.

**5)** 10                                         **6)** 0.237

**7)** 38.005                                     **8)** 380,050

**9)** 0.38005                                    **10)** 0.00038005

## Write these numbers in Standard Notation:

**11)**     $5.7\,8\,6 \times 10^{2}$                    **12)**     $1.0\,2 \times 10^{5}$

**13)**     $3.0\,1\,5 \times 10^{-2}$                   **14)**     $4.2 \times 10^{-4}$

**15)**     $7.0 \times 10^{1}$                          **16)**     $2.3\,0\,0\,2 \times 10^{8}$

**17)**     $4.8 \times 10^{0}$                          **18)**     $1.0\,0\,0\,2 \times 10^{3}$

**19)**     $9.9\,9\,9\,9 \times 10^{2}$                 **20)**     $8.5\,7\,3 \times 10^{-1}$

**Answers**

1)      $2.6\,8\,4 \times 10^3$

2)      $7.6\,2 \times 10^{-4}$

3)      $5.8\,9\,3\,5 \times 10^2$

4)      $8.7\,5 \times 10^0$

5)      $1.0 \times 10^1$

6)      $2.3\,7 \times 10^{-1}$

7)      $3.8005 \times 10^1$

8)      $3.8005 \times 10^5$

9)      $3.8005 \times 10^{-1}$

10)    $3.8005 \times 10^{-4}$

11)    578.6

12)    102,000

13)    0.03015

14)    0.00042

15)    70

16)    230,020,000

17)    4.8

18)    1,000.2

19)    999.99

20)    0.8573