# How is a number converted to scientific notation? Bump the decimal point over so that it’s just to the right of the first nonzero digit. If the original number is >1, then the exponent is positive. If the original number is <1, then the exponent is negative.

|  |  |
| --- | --- |
| Number | Scientific notation |
| 507 | 5.07 × 102 |
| 186282 | 1.86282 × 105 |
| 602000000000000000000000 | 6.02 × 1023 |
| 0.00507 | 5.07 × 10-3 |
| 0.000001 | 1 × 10-6 |
| 0.00000000000000000000000167 | 1.67 × 10-24 |

**Convert the following into scientific notation.**

|  |  |
| --- | --- |
| **Number** | **Scientific Notation** |
| **Ex: 0.0000053m** | **5.3x10-6m** |
| 1.8800000000m |  |
| 2. 0.0015kg |  |
| 3. 0.00000000006kg/m3 |  |
| 4. 8002000Hz |  |
| 5. 0.009003A |  |
| 6. 70000000000000000km |  |
| 7. 6028L |  |
| 8. 0.2105g |  |
| 9. 600005000kJ/h |  |
| 10. 33.8m3 |  |

**Convert the following into the appropriate number.**

|  |  |
| --- | --- |
| **Scientific Notation** | **Number** |
| **Ex: 9.89x103nm** | **9890nm** |
| 1. 4.74x104km |  |
| 2. 4.0x10-5m3 |  |
| 3. 4.0229x108nm |  |
| 4. 3.15x103mg |  |
| 5. 2.112x10-3m |  |
| 6. 6.85x107nm |  |
| 7. 1.788x10-5L |  |
| 8. 7.111x10-3m2 |  |
| 9. 7.89x109dm |  |
| 10. 7.69x10-12 |  |

Determine the number of significant figures in each number and write it to the left of the number.

\_\_1)96.7

\_\_2)9.6700

\_\_3)7.0200

\_\_4)0.04010

\_\_5)54.000

\_\_6)70164

\_\_7)0.8000080

\_\_8)90

\_\_9)0.009

\_\_10)50000

Solve the following math problems. First, circle the calculator answer. Then, write the rounded significant figure answer on the blank.

11) 0.03287g x 45.2g=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) 125.5kg+52.68kg+2.1kg=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13) 0.258g ÷ 0.36105mL=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14) 1250**.**cal-(234.207cal2÷52.69cal)=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15) (0.12g+5.16g) x (93.0g-45.56g)=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_