

Scientific Notation and Unit Prefixes

Make the following conversions:

- | | |
|-------------------|-------------------|
| 1) 3.4 L to mL | 6) 45 m to cm |
| 2) 876 mm to m | 7) 11.7 g to kg |
| 3) 78 999 mg to g | 8) 0.0009 kL to L |
| 4) 0.9 cg to g | 9) 44 cm to m |
| 5) 112 m to mm | 10) 277 kg to g |

Convert the following to scientific notation:

- 11) 45 700 _____
- 12) 0.009 _____
- 13) 23 _____
- 14) 0.9 _____
- 15) 24 212 000 _____
- 16) 0.000665 _____

Convert the following to scientific notation:

- 17) 21.9 _____
- 18) 0.00332 _____
- 19) 321 _____
- 20) 0.119 _____
- 21) 1492 _____
- 22) 0.2713 _____
- 23) 314159 _____
- 24) 6022 _____
- 25) 0.12011 _____

Convert the following numbers in scientific notation to expanded form:

- 26) 3.825×10^3 _____
- 27) 6.3×10^4 _____
- 28) 2.3×10^{-2} _____
- 29) 4.44×10^{-6} _____
- 30) 7.121×10^9 _____
- 31) 1.2×10^{-1} _____
- 32) 1.8×10^2 _____
- 33) 8.1×10^{-4} _____
- 34) 6.7×10^5 _____
- 35) 3.4×10^7 _____

Scientific Notation and Unit Prefixes – Answer Key

Make the following conversions:

- | | |
|---|--|
| 1) 3.4 liters to milliliters
3400 mL | 6) 45 meters to centimeters
450 cm |
| 2) 876 millimeters to meters
0.876 m | 7) 11.7 grams to kilograms
0.0117 kg |
| 3) 78,999 milligrams to grams
78.999 g | 8) 0.0009 kiloliters to liters
0.9 L |
| 4) 0.9 centigrams to grams
0.09 g | 9) 44 centimeters to meters
0.44 m |
| 5) 112 meters to millimeters
112,000 mm | 10) 277 kilograms to grams
277,000 g |

Convert the following to scientific notation:

- 11) 45,700 **4.57×10^4**
12) 0.009 **9×10^{-3}**
13) 23 **2.3×10^1**
14) 0.9 **9×10^{-1}**
15) 24,212,000 **2.4212×10^7**
16) 0.000665 **6.65×10^{-4}**

Convert the following to scientific notation:

- 17) 21.9 **2.19×10^1**
- 18) 0.00332 **3.32×10^{-3}**
- 19) 321 **3.21×10^2**
- 20) 0.119 **1.19×10^{-1}**
- 21) 1492 **1.492×10^3**
- 22) 0.2713 **2.713×10^{-1}**
- 23) 314159 **3.14159×10^5**
- 24) 6022 **6.022×10^3**
- 25) 0.12011 **1.2011×10^{-1}**

Convert the following numbers in scientific notation to expanded form:

- 26) 3.825×10^3 **3,825**
- 27) 6.3×10^4 **63,000**
- 28) 2.3×10^{-2} **0.023**
- 29) 4.44×10^{-6} **0.00000444**
- 30) 7.121×10^9 **7,121,000,000**
- 31) 1.2×10^{-1} **0.12**
- 32) 1.8×10^2 **180**
- 33) 8.1×10^{-4} **0.00081**
- 34) 6.7×10^5 **670,000**
- 35) 3.4×10^7 **34,000,000**