| 1 |  | Periodic Table of Elements | | | | | | | | | |  |  |  |  |  | 18 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1**  **H**  Hydrogen  1.008 | 2 |  |  |  |  |  |  |  |  |  |  | 13 | 14 | 15 | 16 | 17 | **2**  **He**  Helium  4.003 |
| **3**  **Li**  Lithium  6.941 | **4**  **Be**  Beryllium  9.012 |  |  | **Key:** | | **6**  **C**  Carbon  12.01 | Atomic Number  Symbol  Name  Average Atomic Mass | | | |  | **5**  **B**  Boron  10.81 | **6**  **C**  Carbon  12.01 | **7**  **N**  Nitrogen  14.01 | **8**  **O**  Oxygen  16.00 | **9**  **F**  Fluorine  19.00 | **10**  **Ne**  Neon  20.18 |
| **11**  **Na**  Sodium  22.99 | **12**  **Mg**  Magnesium  24.31 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | **13**  **Al**  Aluminum  26.98 | **14**  **Si**  Silicon  28.09 | **15**  **P**  Phosphorus  30.97 | **16**  **S**  Sulfur  32.07 | **17**  **Cl**  Chlorine  35.45 | **18**  **Ar**  Argon  39.95 |
| **19**  **K**  Potassium  39.10 | **20**  **Ca**  Calcium  40.08 | **21**  **Sc**  Scandium  44.96 | **22**  **Ti**  Titanium  47.88 | **23**  **V**  Vanadium  50.94 | **24**  **Cr**  Chromium  52.00 | **25**  **Mn**  Manganese  54.94 | **26**  **Fe**  Iron  55.85 | **27**  **Co**  Cobalt  58.93 | **28**  **Ni**  Nickel  58.69 | **29**  **Cu**  Copper  63.55 | **30**  **Zn**  Zinc  65.41 | **31**  **Ga**  Gallium  69.72 | **32**  **Ge**  Germanium  72.59 | **33**  **As**  Arsenic  74.92 | **34**  **Se**  Selenium  78.96 | **35**  **Br**  Bromine  79.90 | **36**  **Kr**  Krypton  83.80 |
| **37**  **Rb**  Rubidium  85.47 | **38**  **Sr**  Strontium  87.62 | **39**  **Y**  Yttrium  88.91 | **40**  **Zr**  Zirconium  91.22 | **41**  **Nb**  Niobium  92.91 | **42**  **Mo**  Molybdenum  95.94 | **43**  **Tc**  Technetium  (98) | **44**  **Ru**  Ruthenium  101.1 | **45**  **Rh**  Rhodium  102.9 | **46**  **Pd**  Palladium  106.4 | **47**  **Ag**  Silver  107.9 | **48**  **Cd**  Cadmium  112.4 | **49**  **In**  Indium  114.8 | **50**  **Sn**  Tin  118.7 | **51**  **Sb**  Antimony  121.8 | **52**  **Te**  Tellurium  127.6 | **53**  **I**  Iodine  126.9 | **54**  **Xe**  Xenon  131.3 |
| **55**  **Cs**  Cesium  132.9 | **56**  **Ba**  Barium  137.3 | **57**  **La**  Lanthanum  138.9 | **72**  **Hf**  Hafnium  178.5 | **73**  **Ta**  Tantalum  180.9 | **74**  **W**  Tungsten  183.9 | **75**  **Re**  Rhenium  186.2 | **76**  **Os**  Osmium  190.2 | **77**  **Ir**  Iridium  192.2 | **78**  **Pt**  Platinum  195.1 | **79**  **Au**  Gold  197.0 | **80**  **Hg**  Mercury  200.6 | **81**  **Tl**  Thallium  204.4 | **82**  **Pb**  Lead  207.2 | **83**  **Bi**  Bismuth  209.0 | **84**  **Po**  Polonium  (209) | **85**  **At**  Astatine  (210) | **86**  **Rn**  Radon  (222) |
| **87**  **Fr**  Francium  (223) | **88**  **Ra**  Radium  226 | **89**  **Ac**  Actinium  (227) | **104**  **Rf**  Rutherfordium  (267) | **105**  **Db**  Dubnium  (268) | **106**  **Sg**  Seaborgium  (269) | **107**  **Bh**  Bohrium  (270) | **108**  **Hs**  Hassium  (277) | **109**  **Mt**  Meitnerium  (278) | **110**  **Ds**  Darmstadtium  (281) | **111**  **Rg**  Roentgenium  (282) | **112**  **Cn**  Copernicium  (285) | **113**  **Nh**  Nihonium  (286) | **114**  **Fl**  Flerovium  (289) | **115**  **Mc**  Moscovium  (290) | **116**  **Lv**  Livermorium  (293) | **117**  **Ts**  Tennessine  (294) | **118**  **Og**  Oganesson  (294) |

|  |  |  | **58**  **Ce**  Cerium  140.1 | **59**  **Pr**  Praseodymium  140.9 | **60**  **Nd**  Neodymium  144.2 | **61**  **Pm**  Promethium  (145) | **62**  **Sm**  Samarium  150.4 | **63**  **Eu**  Europium  152.0 | **64**  **Gd**  Gadolinium  157.3 | **65**  **Tb**  Terbium  158.9 | **66**  **Dy**  Dysprosium  162.5 | **67**  **Ho**  Holium  164.9 | **68**  **Er**  Erbium  167.3 | **69**  **Tm**  Thulium  168.9 | **70**  **Yb**  Ytterbium  173.0 | **71**  **Lu**  Lutetium  175.0 |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **90**  **Th**  Thorium  232.0 | **91**  **Pa**  Proctactinium  231.0 | **92**  **U**  Uranium  238.0 | **93**  **Np**  Neptunium  (237) | **94**  **Pu**  Plutonium  (244) | **95**  **Am**  Americium  (243) | **96**  **Cm**  Curium  (247) | **97**  **Bk**  Berkelium  (247) | **98**  **Cf**  Californium  (251) | **99**  **Es**  Einsteinium  (252) | **100**  **Fm**  Fermium  (257) | **101**  **Md**  Mendelevium  (258) | **102**  **No**  Nobelium  (259) | **103**  **Lr**  Lawrencium  (262) |  |