

Periodic Table of Elements and Atomic Structure

- Memorize the Name, Symbol, and Atomic Number of the following Elements: Hydrogen, Helium, Carbon, Nitrogen, Oxygen, Sodium, Copper, Gold and Uranium.
- The atomic number of an element is the number of protons in its nucleus and the number of electrons in the orbitals of a neutral atom.
- The atomic mass number of an isotope is the sum of the number of protons and the number of neutrons in the atom's nucleus. Mass numbers of isotopes are given as whole numbers.
- The atomic mass of an element is a decimal value which represents the relative amounts of the isotopes that are found in nature on Earth. The mass number of the most common isotope is determined by rounding the decimal value to the nearest whole number.
- Most elements have more than one isotope. Different isotopes of the same element have the same number of protons but different numbers of neutrons.
- These two pictures show the periodic table entries for the element Mercury (Hg). The one on the left is a part of the periodic table that will accompany your test.

Atomic Number
Symbol
Name
Atomic Mass
Electron Configuration

- Know how to find the correct information on the Periodic Table.
- The number of protons identifies the element.
- The number of neutrons adds to the mass number of an isotope of an element.
- The number of neutrons determines the radioactivity of an isotope of an element.
- Protons and Neutrons are not fundamental particles and are comprised of smaller particles called quarks.
- Electrons are fundamental particles.
- Only electrons are involved in chemical interactions and combinations but the number of electrons in a neutral atom is in turn determined by the number of protons in the nucleus.
- The following page is the periodic table that will accompany your test. The table accompanying you test will have a few elements removed so that you can fill in the entry.

THE PERIODIC TABLE OF ELEMENTS

1 1.0 H Hydrogen																	2 4.00 He Helium
3 6.9 Li Lithium	4 9.0 Be Beryllium											5 10.81 B Boron	6 12.01 C Carbon	7 14.01 N Nitrogen	8 15.999 O Oxygen	9 18.998 F Fluorine	10 20.18 Ne Neon
11 23.0 Na Sodium	12 24.31 Mg Magnesium											13 26.98 Al Aluminum	14 28.09 Si Silicon	15 30.97 P Phosphorus	16 32.06 S Sulfur	17 35.5 Cl Chlorine	18 39.95 Ar Argon
19 39.1 K Potassium	20 40.08 Ca Calcium	21 44.96 Sc Scandium	22 47.87 Ti Titanium	23 50.94 V Vanadium	24 51.996 Cr Chromium	25 54.94 Mn Manganese	26 55.845 Fe Iron	27 58.93 Co Cobalt	28 58.69 Ni Nickel	29 63.54 Cu Copper	30 65.41 Zn Zinc	31 69.72 Ga Gallium	32 72.64 Ge Germanium	33 74.92 As Arsenic	34 78.96 Se Selenium	35 79.90 Br Bromine	36 83.798 Kr Krypton
37 85.5 Rb Rubidium	38 87.62 Sr Strontium	39 88.9 Y Yttrium	40 91.22 Zr Zirconium	41 92.9 Nb Niobium	42 95.94 Mo Molybdenum	43 (98) Tc Technetium	44 101.07 Ru Ruthenium	45 102.91 Rh Rhodium	46 106.42 Pd Palladium	47 107.87 Ag Silver	48 112.41 Cd Cadmium	49 114.82 In Indium	50 118.71 Sn Tin	51 121.76 Sb Antimony	52 127.6 Te Tellurium	53 126.9 I Iodine	54 131.29 Xe Xenon
55 132.9 Cs Cesium	56 137.3 Ba Barium	57 138.9 La Lanthanum	72 178.49 Hf Hafnium	73 180.95 Ta Tantalum	74 183.84 W Tungsten	75 186.21 Re Rhenium	76 190.23 Os Osmium	77 192.22 Ir Iridium	78 195.08 Pt Platinum	79 196.97 Au Gold	80 200.6 Hg Mercury	81 204.38 Tl Thallium	82 207.2 Pb Lead	83 208.98 Bi Bismuth	84 (209) Po Polonium	85 (210) At Astatine	86 (222) Rn Radon
87 (223) Fr Francium	88 (226) Ra Radium	89 (227) Ac Actinium	104 (261) Rf Rutherfordium	105 (262) Db Dubnium	106 (266) Sg Seaborgium	107 (264) Bh Bohrium	108 (277) Hs Hassium	109 (268) Mt Meitnerium	110 (271) Ds Darmstadtium	111 (272) Rg Roentgenium	112 (277) Cn Copernicium	113 (287) Uut Ununtrium	114 (289) Fl Flerovium	115 (288) Uup Ununpentium	116 (289) Lv Livermorium	117 (293) Uss Ununseptium	118 (294) Uuo Ununoctium

58 140.12 Ce Cerium	59 140.91 Pr Praseodymium	60 144.24 Nd Neodymium	61 (145) Pm Promethium	62 150.36 Sm Samarium	63 151.96 Eu Europium	64 157.25 Gd Gadolinium	65 158.93 Tb Terbium	66 162.5 Dy Dysprosium	67 164.93 Ho Holmium	68 167.26 Er Erbium	69 168.93 Tm Thulium	70 173.04 Yb Ytterbium	71 174.97 Lu Lutetium
90 232.04 Th Thorium	91 231.04 Pa Protactinium	92 238.03 U Uranium	93 (237) Np Neptunium	94 (244) Pu Plutonium	95 (243) Am Americium	96 (247) Cm Curium	97 (247) Bk Berkelium	98 (251) Cf Californium	99 (252) Es Einsteinium	100 (257) Fm Fermium	101 (258) Md Mendelevium	102 (259) No Nobelium	103 (262) Lr Lawrencium