# Georgia Physical Science End-of-Course Test

## Periodic Table

**Key**

Atomic number — 29
Element symbol — Cu
Element name — Copper
Average atomic mass — 63.55

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1<br>**H**<br>Hydrogen<br>1.01 | | | | | | | | | | | | | | | | | 2<br>**He**<br>Helium<br>4.00 |
| 3<br>**Li**<br>Lithium<br>6.94 | 4<br>**Be**<br>Beryllium<br>9.01 | | | | | | | | | | | 5<br>**B**<br>Boron<br>10.81 | 6<br>**C**<br>Carbon<br>12.01 | 7<br>**N**<br>Nitrogen<br>14.01 | 8<br>**O**<br>Oxygen<br>16.00 | 9<br>**F**<br>Fluorine<br>19.00 | 10<br>**Ne**<br>Neon<br>20.18 |
| 11<br>**Na**<br>Sodium<br>22.99 | 12<br>**Mg**<br>Magnesium<br>24.31 | | | | | | | | | | | 13<br>**Al**<br>Aluminum<br>26.98 | 14<br>**Si**<br>Silicon<br>28.09 | 15<br>**P**<br>Phosphorus<br>30.97 | 16<br>**S**<br>Sulfur<br>32.07 | 17<br>**Cl**<br>Chlorine<br>35.45 | 18<br>**Ar**<br>Argon<br>39.95 |
| 19<br>**K**<br>Potassium<br>39.10 | 20<br>**Ca**<br>Calcium<br>40.08 | 21<br>**Sc**<br>Scandium<br>44.96 | 22<br>**Ti**<br>Titanium<br>47.87 | 23<br>**V**<br>Vanadium<br>50.94 | 24<br>**Cr**<br>Chromium<br>52.00 | 25<br>**Mn**<br>Manganese<br>54.94 | 26<br>**Fe**<br>Iron<br>55.85 | 27<br>**Co**<br>Cobalt<br>58.93 | 28<br>**Ni**<br>Nickel<br>58.69 | 29<br>**Cu**<br>Copper<br>63.55 | 30<br>**Zn**<br>Zinc<br>65.39 | 31<br>**Ga**<br>Gallium<br>69.72 | 32<br>**Ge**<br>Germanium<br>72.61 | 33<br>**As**<br>Arsenic<br>74.92 | 34<br>**Se**<br>Selenium<br>78.96 | 35<br>**Br**<br>Bromine<br>79.90 | 36<br>**Kr**<br>Krypton<br>83.80 |
| 37<br>**Rb**<br>Rubidium<br>85.47 | 38<br>**Sr**<br>Strontium<br>87.62 | 39<br>**Y**<br>Yttrium<br>88.91 | 40<br>**Zr**<br>Zirconium<br>91.22 | 41<br>**Nb**<br>Niobium<br>92.91 | 42<br>**Mo**<br>Molybdenum<br>95.94 | 43<br>**Tc**<br>Technetium<br>(98) | 44<br>**Ru**<br>Ruthenium<br>101.07 | 45<br>**Rh**<br>Rhodium<br>102.91 | 46<br>**Pd**<br>Palladium<br>106.42 | 47<br>**Ag**<br>Silver<br>107.87 | 48<br>**Cd**<br>Cadmium<br>112.41 | 49<br>**In**<br>Indium<br>114.82 | 50<br>**Sn**<br>Tin<br>118.71 | 51<br>**Sb**<br>Antimony<br>121.76 | 52<br>**Te**<br>Tellurium<br>127.60 | 53<br>**I**<br>Iodine<br>126.90 | 54<br>**Xe**<br>Xenon<br>131.29 |
| 55<br>**Cs**<br>Cesium<br>132.91 | 56<br>**Ba**<br>Barium<br>137.33 | 57-71<br>☆ | 72<br>**Hf**<br>Hafnium<br>178.49 | 73<br>**Ta**<br>Tantalum<br>180.95 | 74<br>**W**<br>Tungsten<br>183.84 | 75<br>**Re**<br>Rhenium<br>186.21 | 76<br>**Os**<br>Osmium<br>190.23 | 77<br>**Ir**<br>Iridium<br>192.22 | 78<br>**Pt**<br>Platinum<br>195.08 | 79<br>**Au**<br>Gold<br>196.97 | 80<br>**Hg**<br>Mercury<br>200.59 | 81<br>**Tl**<br>Thallium<br>204.38 | 82<br>**Pb**<br>Lead<br>207.2 | 83<br>**Bi**<br>Bismuth<br>208.98 | 84<br>**Po**<br>Polonium<br>(209) | 85<br>**At**<br>Astatine<br>(210) | 86<br>**Rn**<br>Radon<br>(222) |
| 87<br>**Fr**<br>Francium<br>(223) | 88<br>**Ra**<br>Radium<br>(226) | 89-103<br>☆☆ | 104<br>**Rf**<br>Rutherfordium<br>(261) | 105<br>**Db**<br>Dubnium<br>(262) | 106<br>**Sg**<br>Seaborgium<br>(266) | 107<br>**Bh**<br>Bohrium<br>(264) | 108<br>**Hs**<br>Hassium<br>(269) | 109<br>**Mt**<br>Meitnerium<br>(268) | 110<br>**Ds**<br>Darmstadtium<br>(281) | 111<br>**Rg**<br>Roentgenium<br>(272) | 112<br>**Uub**<br>Ununbium<br>(285) | 113<br>**Uut**<br>Ununtrium<br>(284) | 114<br>**Uuq**<br>Ununquadium<br>(289) | 115<br>**Uup**<br>Ununpentium<br>(288) | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ☆ Lanthanide series | 57<br>**La**<br>Lanthanum<br>138.91 | 58<br>**Ce**<br>Cerium<br>140.12 | 59<br>**Pr**<br>Praseodymium<br>140.91 | 60<br>**Nd**<br>Neodymium<br>144.24 | 61<br>**Pm**<br>Promethium<br>(145) | 62<br>**Sm**<br>Samarium<br>150.36 | 63<br>**Eu**<br>Europium<br>151.96 | 64<br>**Gd**<br>Gadolinium<br>157.25 | 65<br>**Tb**<br>Terbium<br>158.93 | 66<br>**Dy**<br>Dysprosium<br>162.50 | 67<br>**Ho**<br>Holmium<br>164.93 | 68<br>**Er**<br>Erbium<br>167.26 | 69<br>**Tm**<br>Thulium<br>168.93 | 70<br>**Yb**<br>Ytterbium<br>173.04 | 71<br>**Lu**<br>Lutetium<br>174.97 |
| ☆☆ Actinide series | 89<br>**Ac**<br>Actinium<br>(227) | 90<br>**Th**<br>Thorium<br>232.04 | 91<br>**Pa**<br>Protactinium<br>231.04 | 92<br>**U**<br>Uranium<br>238.03 | 93<br>**Np**<br>Neptunium<br>(237) | 94<br>**Pu**<br>Plutonium<br>(244) | 95<br>**Am**<br>Americium<br>(243) | 96<br>**Cm**<br>Curium<br>(247) | 97<br>**Bk**<br>Berkelium<br>(247) | 98<br>**Cf**<br>Californium<br>(251) | 99<br>**Es**<br>Einsteinium<br>(252) | 100<br>**Fm**<br>Fermium<br>(257) | 101<br>**Md**<br>Mendelevium<br>(258) | 102<br>**No**<br>Nobelium<br>(259) | 103<br>**Lr**<br>Lawrencium<br>(262) |