

Atomic number: 1

Name: Hydrogen

Symbol: H

Average Atomic Mass (amu): 1.008

Group: 1/1A

Period: 1

Classification: nonmetal

Electronegativity: 2.2

Most common oxidation states: -1, +1

Protons: 1

Electrons: 1

Neutrons: 0

Standard state at 20°C: gas

Atomic number: 2

Name: Helium

Symbol: He

Average Atomic Mass (amu): 4.003

Group: 18/8A

Period: 1

Classification: noble gas

Electronegativity: unknown

Most common oxidation states:

Protons: 2

Electrons: 2

Neutrons: 2

Standard state at 20°C: gas

Atomic number: 3

Name: Lithium

Symbol: Li

Average Atomic Mass (amu): 6.94

Group: 1/1A

Period: 2

Classification: alkali metal

Electronegativity: 0.98

Most common oxidation states: 1

Protons: 3

Electrons: 3

Neutrons: 4

Standard state at 20°C: solid

Atomic number: 4

Name: Beryllium

Symbol: Be

Average Atomic Mass (amu): 9.012

Group: 2/2A

Period: 2

Classification: alkaline earth metal

Electronegativity: 1.57

Most common oxidation states: 2

Protons: 4

Electrons: 4

Neutrons: 5

Standard state at 20°C: solid

Atomic number: 5

Name: Boron

Symbol: B

Average Atomic Mass (amu): 10.81

Group: 13/3A

Period: 2

Classification: metalloid

Electronegativity: 2.04

Most common oxidation states: 3

Protons: 5

Electrons: 5

Neutrons: 6

Standard state at 20°C: solid

Atomic number: 6

Name: Carbon

Symbol: C

Average Atomic Mass (amu): 12.011

Group: 14/4A

Period: 2

Classification: nonmetal

Electronegativity: 2.55

Most common oxidation states: -4, -3, -2, -1, 0, +1, +2, +3, +4

Protons: 6

Electrons: 6

Neutrons: 6

Standard state at 20°C: solid

Atomic number: 7

Name: Nitrogen

Symbol: N

Average Atomic Mass (amu): 14.007

Group: 15/5A

Period: 2

Classification: nonmetal

Electronegativity: 3.04

Most common oxidation states: -3, +2, +3, +4, +5

Protons: 7

Electrons: 7

Neutrons: 7

Standard state at 20°C: gas

Atomic number: 8

Name: Oxygen

Symbol: O

Average Atomic Mass (amu): 15.999

Group: 16/6A

Period: 2

Classification: nonmetal

Electronegativity: 3.44

Most common oxidation states: -2, -1

Protons: 8

Electrons: 8

Neutrons: 8

Standard state at 20°C: gas

Atomic number: 9

Name: Fluorine

Symbol: F

Average Atomic Mass (amu): 18.998

Group: 17/7A

Period: 2

Classification: halogen

Electronegativity: 3.98

Most common oxidation states: -1

Protons: 9

Electrons: 9

Neutrons: 10

Standard state at 20°C: gas

Atomic number: 10

Name: Neon

Symbol: Ne

Average Atomic Mass (amu): 20.18

Group: 18/8A

Period: 2

Classification: noble gas

Electronegativity: unknown

Most common oxidation states:

Protons: 10

Electrons: 10

Neutrons: 10

Standard state at 20°C: gas

Atomic number: 11

Name: Sodium

Symbol: Na

Average Atomic Mass (amu): 22.99

Group: 1/1A

Period: 3

Classification: alkali metal

Electronegativity: 0.93

Most common oxidation states: 1

Protons: 11

Electrons: 11

Neutrons: 12

Standard state at 20°C: solid

Atomic number: 12

Name: Magnesium

Symbol: Mg

Average Atomic Mass (amu): 24.305

Group: 2/2A

Period: 3

Classification: alkaline earth metal

Electronegativity: 1.31

Most common oxidation states: 2

Protons: 12

Electrons: 12

Neutrons: 12

Standard state at 20°C: solid

Atomic number: 13

Name: Aluminum

Symbol: Al

Average Atomic Mass (amu): 26.982

Group: 13/3A

Period: 3

Classification: metal

Electronegativity: 1.61

Most common oxidation states: 3

Protons: 13

Electrons: 13

Neutrons: 14

Standard state at 20°C: solid

Atomic number: 14

Name: Silicon

Symbol: Si

Average Atomic Mass (amu): 28.085

Group: 14/4A

Period: 3

Classification: metalloid

Electronegativity: 1.9

Most common oxidation states: -4, +4

Protons: 14

Electrons: 14

Neutrons: 14

Standard state at 20°C: solid

Atomic number: 15

Name: Phosphorus

Symbol: P

Average Atomic Mass (amu): 30.974

Group: 15/5A

Period: 3

Classification: nonmetal

Electronegativity: 2.19

Most common oxidation states: -3, +3, +5

Protons: 15

Electrons: 15

Neutrons: 16

Standard state at 20°C: solid

Atomic number: 16

Name: Sulfur

Symbol: S

Average Atomic Mass (amu): 32.06

Group: 16/6A

Period: 3

Classification: nonmetal

Electronegativity: 2.58

Most common oxidation states: -2, +2, +4, +6

Protons: 16

Electrons: 16

Neutrons: 16

Standard state at 20°C: solid

Atomic number: 17

Name: Chlorine

Symbol: Cl

Average Atomic Mass (amu): 35.45

Group: 17/7A

Period: 3

Classification: halogen

Electronegativity: 3.16

Most common oxidation states: -1, +1, +3, +5, +7 Protons: 17

Electrons: 17

Neutrons: 18

Standard state at 20°C: gas

Atomic number: 18

Name: Argon

Symbol: Ar

Average Atomic Mass (amu): 39.948

Group: 18/8A

Period: 3

Classification: noble gas

Electronegativity: unknown

Most common oxidation states:

Protons: 18



Electrons: 18

Neutrons: 22

Standard state at 20°C: gas

Atomic number: 19

Name: Potassium

Symbol: K

Average Atomic Mass (amu): 39.098

Group: 1/1A

Period: 4

Classification: alkali metal

Electronegativity: 0.82

Most common oxidation states: 1

Protons: 19

Electrons: 19

Neutrons: 20

Standard state at 20°C: solid

Atomic number: 20

Name: Calcium

Symbol: Ca

Average Atomic Mass (amu): 40.078

Group: 2/2A

Period: 4

Classification: alkaline earth metal

Electronegativity: 1

Most common oxidation states: 2

Protons: 20

Electrons: 20

Neutrons: 20

Standard state at 20°C: solid

Atomic number: 21

Name: Scandium

Symbol: Sc

Average Atomic Mass (amu): 44.956

Group: 3/3B

Period: 4

Classification: transition metal

Electronegativity: 1.36

Most common oxidation states: 3

Protons: 21

Electrons: 21

Neutrons: 24

Standard state at 20°C: solid

Atomic number: 22

Name: Titanium

Symbol: Ti

Average Atomic Mass (amu): 47.867

Group: 4/4B

Period: 4

Classification: transition metal

Electronegativity: 1.54

Most common oxidation states: +3, +4

Protons: 22

Electrons: 22

Neutrons: 26

Standard state at 20°C: solid

Atomic number: 23

Name: Vanadium

Symbol: V

Average Atomic Mass (amu): 50.942

Group: 5/5B

Period: 4

Classification: transition metal

Electronegativity: 1.63

Most common oxidation states: 0, +2, +3, +4, +5

Protons: 23

Electrons: 23

Neutrons: 28

Standard state at 20°C: solid

Atomic number: 24

Name: Chromium

Symbol: Cr

Average Atomic Mass (amu): 51.996

Group: 6/6B

Period: 4

Classification: transition metal

Electronegativity: 1.66

Most common oxidation states: 0, +2, +3, +6

Protons: 24

Electrons: 24

Neutrons: 28

Standard state at 20°C: solid

Atomic number: 25

Name: Manganese

Symbol: Mn

Average Atomic Mass (amu): 54.938

Group: 7/7B

Period: 4

Classification: transition metal

Electronegativity: 1.55

Most common oxidation states: -1, 0, +2, +3, +4, +6, +7

Protons: 25

Electrons: 25

Neutrons: 30

Standard state at 20°C: solid

Atomic number: 26

Name: Iron

Symbol: Fe

Average Atomic Mass (amu): 55.845

Group: 8/8B

Period: 4

Classification: transition metal

Electronegativity: 1.83

Most common oxidation states: -2, 0, +2, +3, +6

Protons: 26

Electrons: 26

Neutrons: 30

Standard state at 20°C: solid

Atomic number: 27

Name: Cobalt

Symbol: Co

Average Atomic Mass (amu): 58.933

Group: 9/8B

Period: 4

Classification: transition metal

Electronegativity: 1.88

Most common oxidation states: -1, 0, +2, +3

Protons: 27

Electrons: 27

Neutrons: 32

Standard state at 20°C: solid

Atomic number: 28

Name: Nickel

Symbol: Ni

Average Atomic Mass (amu): 58.693

Group: 10/8B

Period: 4

Classification: transition metal

Electronegativity: 1.91

Most common oxidation states: 0, +2, +3

Protons: 28

Electrons: 28

Neutrons: 31

Standard state at 20°C: solid

Atomic number: 29

Name: Copper

Symbol: Cu

Average Atomic Mass (amu): 63.546

Group: 11/1A

Period: 4

Classification: transition metal

Electronegativity: 1.9

Most common oxidation states: +1, +2

Protons: 29

Electrons: 29

Neutrons: 35

Standard state at 20°C: solid

Atomic number: 30

Name: Zinc

Symbol: Zn

Average Atomic Mass (amu): 65.38

Group: 12/2B

Period: 4

Classification: transition metal

Electronegativity: 1.65

Most common oxidation states: 2

Protons: 30

Electrons: 30

Neutrons: 35

Standard state at 20°C: solid

Atomic number: 31

Name: Gallium

Symbol: Ga

Average Atomic Mass (amu): 69.723

Group: 13/3A

Period: 4

Classification: metal

Electronegativity: 1.81

Most common oxidation states: 3

Protons: 31

Electrons: 31

Neutrons: 39

Standard state at 20°C: solid

Atomic number: 32

Name: Germanium

Symbol: Ge

Average Atomic Mass (amu): 72.63

Group: 14/4A

Period: 4

Classification: metalloid

Electronegativity: 2.01

Most common oxidation states: -+4

Protons: 32

Electrons: 32

Neutrons: 41

Standard state at 20°C: solid

Atomic number: 33

Name: Arsenic

Symbol: As

Average Atomic Mass (amu): 74.922

Group: 15/5A

Period: 4

Classification: metalloid

Electronegativity: 2.18

Most common oxidation states: -3, +3, +5

Protons: 33

Electrons: 33

Neutrons: 42

Standard state at 20°C: solid

Atomic number: 34

Name: Selenium

Symbol: Se

Average Atomic Mass (amu): 78.971

Group: 16/6A

Period: 4

Classification: nonmetal

Electronegativity: 2.55

Most common oxidation states: -2, +4, +6

Protons: 34

Electrons: 34

Neutrons: 45

Standard state at 20°C: solid

Atomic number: 35

Name: Bromine

Symbol: Br

Average Atomic Mass (amu): 79.904

Group: 17/7A

Period: 4

Classification: halogen

Electronegativity: 2.96

Most common oxidation states: -1, +1, +3, +5, +7

Protons: 35

Electrons: 35

Neutrons: 45

Standard state at 20°C: liquid

Atomic number: 36

Name: Krypton

Symbol: Kr

Average Atomic Mass (amu): 83.798

Group: 18/8A

Period: 4



Classification: noble gas

Electronegativity: unknown

Most common oxidation states: 2

Protons: 36

Electrons: 36

Neutrons: 48

Standard state at 20°C: gas

Atomic number: 37

Name: Rubidium

Symbol: Rb

Average Atomic Mass (amu): 85.468

Group: 1/1A

Period: 5

Classification: alkali metal

Electronegativity: 0.82

Most common oxidation states: 1

Protons: 37

Electrons: 37

Neutrons: 48

Standard state at 20°C: solid

Atomic number: 38

Name: Strontium

Symbol: Sr

Average Atomic Mass (amu): 87.62

Group: 2/2A

Period: 5

Classification: alkaline earth metal

Electronegativity: 0.95

Most common oxidation states: 2

Protons: 38

Electrons: 38

Neutrons: 50

Standard state at 20°C: solid

Atomic number: 39

Name: Yttrium

Symbol: Y

Average Atomic Mass (amu): 88.906

Group: 3/3B

Period: 5

Classification: transition metal

Electronegativity: 1.22

Most common oxidation states: 3

Protons: 39

Electrons: 39

Neutrons: 50

Standard state at 20°C: solid

Atomic number: 40

Name: Zirconium

Symbol: Zr

Average Atomic Mass (amu): 91.224

Group: 4/4B

Period: 5

Classification: transition metal

Electronegativity: 1.33

Most common oxidation states: 4

Protons: 40

Electrons: 40

Neutrons: 51

Standard state at 20°C: solid

Atomic number: 41

Name: Niobium

Symbol: Nb

Average Atomic Mass (amu): 92.906

Group: 5/5B

Period: 5

Classification: transition metal

Electronegativity: 1.6

Most common oxidation states: +3, +5

Protons: 41

Electrons: 41

Neutrons: 52

Standard state at 20°C: solid

Atomic number: 42

Name: Molybdenum

Symbol: Mo

Average Atomic Mass (amu): 95.95

Group: 6/6B

Period: 5

Classification: transition metal

Electronegativity: 2.16

Most common oxidation states: 0, +2, +3, +4, +5, +6

Protons: 42

Electrons: 42

Neutrons: 54

Standard state at 20°C: solid

Atomic number: 43

Name: Technetium

Symbol: Tc

Average Atomic Mass (amu): [98] no stable isotopes

Group: 7/7B

Period: 5

Classification: transition metal

Electronegativity: 2.1

Most common oxidation states: 7

Protons: 43

Electrons: 43

Neutrons: 55

Standard state at 20°C: solid

Atomic number: 44

Name: Ruthenium

Symbol: Ru

Average Atomic Mass (amu): 101.07

Group: 8/8B

Period: 5

Classification: transition metal

Electronegativity: 2.2

Most common oxidation states: -2, 0, +2, +3, +4, +6, +8

Protons: 44

Electrons: 44

Neutrons: 57

Standard state at 20°C: solid

Atomic number: 45

Name: Rhodium

Symbol: Rh

Average Atomic Mass (amu): 102.906

Group: 9/8B

Period: 5

Classification: transition metal

Electronegativity: 2.28

Most common oxidation states: 0, +1, +2, +3, +4, +5

Protons: 45

Electrons: 45

Neutrons: 58

Standard state at 20°C: solid

Atomic number: 46

Name: Palladium

Symbol: Pd

Average Atomic Mass (amu): 106.42

Group: 10/8B

Period:

Classification: transition metal

Electronegativity: 2.2

Most common oxidation states: 0, +2, +4

Protons: 46

Electrons: 46

Neutrons: 60

Standard state at 20°C: solid

Atomic number: 47

Name: Silver

Symbol: Ag

Average Atomic Mass (amu): 107.868

Group: 11/1A

Period: 5

Classification: transition metal

Electronegativity: 1.93

Most common oxidation states: +1, +2

Protons: 47

Electrons: 47

Neutrons: 61

Standard state at 20°C: solid

Atomic number: 48

Name: Cadmium

Symbol: Cd

Average Atomic Mass (amu): 112.414

Group: 12/2B

Period: 5

Classification: transition metal

Electronegativity: 1.69

Most common oxidation states: 2

Protons: 48

Electrons: 48

Neutrons: 64

Standard state at 20°C: solid

Atomic number: 49

Name: Indium

Symbol: In

Average Atomic Mass (amu): 114.818

Group: 13/3A

Period: 5

Classification: metal

Electronegativity: 1.78

Most common oxidation states: 3

Protons: 49

Electrons: 49

Neutrons: 66

Standard state at 20°C: solid

Atomic number: 50

Name: Tin

Symbol: Sn

Average Atomic Mass (amu): 118.71

Group: 14/4A

Period: 5

Classification: metal

Electronegativity: 1.96

Most common oxidation states: +2, +4

Protons: 50

Electrons: 50

Neutrons: 69

Standard state at 20°C: solid

Atomic number: 51

Name: Antimony

Symbol: Sb

Average Atomic Mass (amu): 121.76

Group: 15/5A

Period: 5

Classification: metalloid

Electronegativity: 2.05

Most common oxidation states: -3, +3, +5

Protons: 51

Electrons: 51

Neutrons: 71

Standard state at 20°C: solid

Atomic number: 52

Name: Tellurium

Symbol: Te

Average Atomic Mass (amu): 127.6

Group: 16/6A

Period: 5

Classification: metalloid

Electronegativity: 2.1

Most common oxidation states: -2, +4, +6

Protons: 52

Electrons: 52

Neutrons: 76

Standard state at 20°C: solid

Atomic number: 53

Name: Iodine

Symbol: I

Average Atomic Mass (amu): 126.904

Group: 17/7A

Period: 5

Classification: halogen

Electronegativity: 2.66

Most common oxidation states: -1, +1, +5, +7

Protons: 53

Electrons: 53

Neutrons: 74

Standard state at 20°C: solid

Atomic number: 54

Name: Xenon



Symbol: Xe

Average Atomic Mass (amu): 131.293

Group: 18/8A

Period: 5

Classification: noble gas

Electronegativity: 2.6

Most common oxidation states: +2, +4, +6

Protons: 54

Electrons: 54

Neutrons: 77

Standard state at 20°C: gas

Atomic number: 55

Name: Cesium

Symbol: Cs

Average Atomic Mass (amu): 132.905

Group: 1/1A

Period: 6

Classification: alkali metal

Electronegativity: 0.79

Most common oxidation states: 1

Protons: 55

Electrons: 55

Neutrons: 78

Standard state at 20°C: solid

Atomic number: 56

Name: Barium

Symbol: Ba

Average Atomic Mass (amu): 137.327

Group: 2/2A

Period: 6

Classification: alkaline earth metal

Electronegativity: 0.89

Most common oxidation states: 2

Protons: 56

Electrons: 56

Neutrons: 81

Standard state at 20°C: solid

Atomic number: 57

Name: Lanthanum

Symbol: La

Average Atomic Mass (amu): 138.905

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.1

Most common oxidation states: 3

Protons: 57

Electrons: 57

Neutrons: 82

Standard state at 20°C: solid

Atomic number: 58

Name: Cerium

Symbol: Ce

Average Atomic Mass (amu): 140.116

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.12

Most common oxidation states: +3, +4

Protons: 58

Electrons: 58

Neutrons: 82

Standard state at 20°C: solid

Atomic number: 59

Name: Praseodymium

Symbol: Pr

Average Atomic Mass (amu): 140.908

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.13

Most common oxidation states: +3, +4

Protons: 59

Electrons: 59

Neutrons: 82

Standard state at 20°C: solid

Atomic number: 60

Name: Neodymium

Symbol: Nd

Average Atomic Mass (amu): 144.242

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.14

Most common oxidation states: 3

Protons: 60

Electrons: 60

Neutrons: 84

Standard state at 20°C: solid

Atomic number: 61

Name: Promethium

Symbol: Pm

Average Atomic Mass (amu): [145] no stable isotopes

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: unknown

Most common oxidation states: 3

Protons: 61

Electrons: 61

Neutrons: 84

Standard state at 20°C: solid

Atomic number: 62

Name: Samarium

Symbol: Sm

Average Atomic Mass (amu): 150.36

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.17

Most common oxidation states: +2, +3

Protons: 62

Electrons: 62

Neutrons: 88

Standard state at 20°C: solid

Atomic number: 63

Name: Europium

Symbol: Eu

Average Atomic Mass (amu): 151.964

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: unknown

Most common oxidation states: +2, +3

Protons: 63

Electrons: 63

Neutrons: 89

Standard state at 20°C: solid

Atomic number: 64

Name: Gadolinium

Symbol: Gd

Average Atomic Mass (amu): 157.25

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.2

Most common oxidation states: 3

Protons: 64

Electrons: 64

Neutrons: 93

Standard state at 20°C: solid

Atomic number: 65

Name: Terbium

Symbol: Tb

Average Atomic Mass (amu): 158.925

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: unknown

Most common oxidation states: +3, +4

Protons: 65

Electrons: 65

Neutrons: 94

Standard state at 20°C: solid

Atomic number: 66

Name: Dysprosium

Symbol: Dy

Average Atomic Mass (amu): 162.5

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.22

Most common oxidation states: 3

Protons: 66

Electrons: 66

Neutrons: 97

Standard state at 20°C: solid

Atomic number: 67

Name: Holmium

Symbol: Ho

Average Atomic Mass (amu): 164.93

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.23

Most common oxidation states: 3

Protons: 67

Electrons: 67

Neutrons: 98

Standard state at 20°C: solid

Atomic number: 68

Name: Erbium

Symbol: Er

Average Atomic Mass (amu): 167.259

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.24

Most common oxidation states: 3

Protons: 68

Electrons: 68

Neutrons: 99

Standard state at 20°C: solid

Atomic number: 69

Name: Thulium

Symbol: Tm

Average Atomic Mass (amu): 168.934

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1.25

Most common oxidation states: +2, +3

Protons: 69

Electrons: 69

Neutrons: 100

Standard state at 20°C: solid

Atomic number: 70

Name: Ytterbium

Symbol: Yb

Average Atomic Mass (amu): 173.045

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: unknown

Most common oxidation states: +2, +3

Protons: 70

Electrons: 70

Neutrons: 103

Standard state at 20°C: solid

Atomic number: 71

Name: Lutetium

Symbol: Lu

Average Atomic Mass (amu): 174.967

Group: 3/3B

Period: 6

Classification: lanthanoid

Electronegativity: 1

Most common oxidation states: 3

Protons: 71

Electrons: 71

Neutrons: 104



Standard state at 20°C: solid

Atomic number: 72

Name: Hafnium

Symbol: Hf

Average Atomic Mass (amu): 178.49

Group: 4/4B

Period: 6

Classification: transition metal

Electronegativity: 1.3

Most common oxidation states: 4

Protons: 72

Electrons: 72

Neutrons: 106

Standard state at 20°C: solid

Atomic number: 73

Name: Tantalum

Symbol: Ta

Average Atomic Mass (amu): 180.948

Group: 5/5B

Period: 6

Classification: transition metal

Electronegativity: 1.5

Most common oxidation states: 5

Protons: 73

Electrons: 73

Neutrons: 108

Standard state at 20°C: solid

Atomic number: 74

Name: Tungsten

Symbol: W

Average Atomic Mass (amu): 183.84

Group: 6/6B

Period: 6

Classification: transition metal

Electronegativity: 1.7

Most common oxidation states: 0, +2, +3, +4, +5, +6

Protons: 74

Electrons: 74

Neutrons: 110

Standard state at 20°C: solid

Atomic number: 75

Name: Rhenium

Symbol: Re

Average Atomic Mass (amu): 186.207

Group: 7/7B

Period: 6

Classification: transition metal

Electronegativity: 1.9

Most common oxidation states: -1, +2, +4, +6, +7

Protons: 75

Electrons: 75

Neutrons: 111

Standard state at 20°C: solid

Atomic number: 76

Name: Osmium

Symbol: Os

Average Atomic Mass (amu): 190.23

Group: 8/8B

Period: 6

Classification: transition metal

Electronegativity: 2.2

Most common oxidation states: -2, 0, +2, +3, +4, +6, +8

Protons: 76

Electrons: 76

Neutrons: 114

Standard state at 20°C: solid

Atomic number: 77

Name: Iridium

Symbol: Ir

Average Atomic Mass (amu): 192.217

Group: 9/8B

Period: 6

Classification: transition metal

Electronegativity: 2.2

Most common oxidation states: -1, 0, +1, +2, +3, +4, +6

Protons: 77

Electrons: 77

Neutrons: 115

Standard state at 20°C: solid

Atomic number: 78

Name: Platinum

Symbol: Pt

Average Atomic Mass (amu): 195.084

Group: 10/8B

Period: 6

Classification: transition metal

Electronegativity: 2.2

Most common oxidation states: +2, +4

Protons: 78

Electrons: 78

Neutrons: 117

Standard state at 20°C: solid

Atomic number: 79

Name: Gold

Symbol: Au

Average Atomic Mass (amu): 196.967

Group: 11/1A

Period: 6

Classification: transition metal

Electronegativity: 2.4

Most common oxidation states: -1, +1, +2, +3, +4, +5

Protons: 79

Electrons: 79

Neutrons: 118

Standard state at 20°C: solid

Atomic number: 80

Name: Mercury

Symbol: Hg

Average Atomic Mass (amu): 200.592

Group: 12/2B

Period: 6

Classification: transition metal

Electronegativity: 1.9

Most common oxidation states: +1, +2

Protons: 80

Electrons: 80

Neutrons: 121

Standard state at 20°C: liquid

Atomic number: 81

Name: Thallium

Symbol: Tl

Average Atomic Mass (amu): 204.38

Group: 13/3A

Period: 6

Classification: metal

Electronegativity: 1.8

Most common oxidation states: +1, +3

Protons: 81

Electrons: 81

Neutrons: 123

Standard state at 20°C: solid

Atomic number: 82

Name: Lead

Symbol: Pb

Average Atomic Mass (amu): 207.2

Group: 14/4A

Period: 6

Classification: metal

Electronegativity: 1.8

Most common oxidation states: +2, +4

Protons: 82

Electrons: 82

Neutrons: 125

Standard state at 20°C: solid

Atomic number: 83

Name: Bismuth

Symbol: Bi

Average Atomic Mass (amu): 208.98

Group: 15/5A

Period: 6

Classification: metal

Electronegativity: 1.9

Most common oxidation states: +3, +5

Protons: 83

Electrons: 83

Neutrons: 126

Standard state at 20°C: solid

Atomic number: 84

Name: Polonium

Symbol: Po

Average Atomic Mass (amu): [209] no stable isotopes

Group: 16/6A

Period: 6

Classification: metalloid

Electronegativity: 2

Most common oxidation states: +2, +4, +6

Protons: 84

Electrons: 84

Neutrons: 125

Standard state at 20°C: solid

Atomic number: 85

Name: Astatine

Symbol: At

Average Atomic Mass (amu): [210] no stable isotopes

Group: 17/7A

Period: 6

Classification: nonmetal

Electronegativity: 2.2

Most common oxidation states: -1, +1, +3, +5, +7

Protons: 85

Electrons: 85

Neutrons: 125

Standard state at 20°C: solid

Atomic number: 86

Name: Radon

Symbol: Rn

Average Atomic Mass (amu): [222] no stable isotopes

Group: 18/8A

Period: 6

Classification: noble gas

Electronegativity: unknown

Most common oxidation states: 2

Protons: 86

Electrons: 86

Neutrons: 136

Standard state at 20°C: gas

Atomic number: 87

Name: Francium

Symbol: Fr

Average Atomic Mass (amu): [223] no stable isotopes

Group: 1/1A

Period: 7

Classification: alkali metal

Electronegativity: 0.7

Most common oxidation states: 1

Protons: 87

Electrons: 87

Neutrons: 136

Standard state at 20°C: solid

Atomic number: 88

Name: Radium

Symbol: Ra

Average Atomic Mass (amu): [226] no stable isotopes

Group: 2/2A

Period: 7

Classification: alkaline earth metal

Electronegativity: 0.9

Most common oxidation states: 2

Protons: 88

Electrons: 88

Neutrons: 138

Standard state at 20°C: solid

Atomic number: 89

Name: Actinium

Symbol: Ac

Average Atomic Mass (amu): [227] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: 1.1



Most common oxidation states: 3

Protons: 89

Electrons: 89

Neutrons: 138

Standard state at 20°C: solid

Atomic number: 90

Name: Thorium

Symbol: Th

Average Atomic Mass (amu): 232.038

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: 1.3

Most common oxidation states: 4

Protons: 90

Electrons: 90

Neutrons: 142

Standard state at 20°C: solid

Atomic number: 91

Name: Protactinium

Symbol: Pa

Average Atomic Mass (amu): 231.036

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: 1.5

Most common oxidation states: +4, +5

Protons: 91

Electrons: 91

Neutrons: 140

Standard state at 20°C: solid

Atomic number: 92

Name: Uranium

Symbol: U

Average Atomic Mass (amu): 238.029

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: 1.7

Most common oxidation states: +3, +4, +5, +6

Protons: 92

Electrons: 92

Neutrons: 146

Standard state at 20°C: solid

Atomic number: 93

Name: Neptunium

Symbol: Np

Average Atomic Mass (amu): [237] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: 1.3

Most common oxidation states: +3, +4, +5, +6

Protons: 93

Electrons: 93

Neutrons: 144

Standard state at 20°C: solid

Atomic number: 94

Name: Plutonium

Symbol: Pu

Average Atomic Mass (amu): [244] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: 1.3

Most common oxidation states: +3, +4, +5, +6

Protons: 94

Electrons: 94

Neutrons: 150

Standard state at 20°C: solid

Atomic number: 95

Name: Americium

Symbol: Am

Average Atomic Mass (amu): [243] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: +3, +4, +5, +6

Protons: 95

Electrons: 95

Neutrons: 148

Standard state at 20°C: solid

Atomic number: 96

Name: Curium

Symbol: Cm

Average Atomic Mass (amu): [247] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: +3, +4

Protons: 96

Electrons: 96

Neutrons: 151

Standard state at 20°C: solid

Atomic number: 97

Name: Berkelium

Symbol: Bk

Average Atomic Mass (amu): [247] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: +3, +4

Protons: 97

Electrons: 97

Neutrons: 150

Standard state at 20°C: solid

Atomic number: 98

Name: Californium

Symbol: Cf

Average Atomic Mass (amu): [251] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: +3, +4

Protons: 98

Electrons: 98

Neutrons: 153

Standard state at 20°C: solid

Atomic number: 99

Name: Einsteinium

Symbol: Es

Average Atomic Mass (amu): [252] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: 3

Protons: 99

Electrons: 99

Neutrons: 153

Standard state at 20°C: solid

Atomic number: 100

Name: Fermium

Symbol: Fm

Average Atomic Mass (amu): [257] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: 3

Protons: 100

Electrons: 100

Neutrons: 157

Standard state at 20°C: solid

Atomic number: 101

Name: Mendelevium

Symbol: Md

Average Atomic Mass (amu): [258] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: 3

Protons: 101

Electrons: 101

Neutrons: 157

Standard state at 20°C: solid

Atomic number: 102

Name: Nobelium

Symbol: No

Average Atomic Mass (amu): [259] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: +2, +3

Protons: 102

Electrons: 102

Neutrons: 157

Standard state at 20°C: solid

Atomic number: 103

Name: Lawrencium

Symbol: Lr

Average Atomic Mass (amu): [262] no stable isotopes

Group: 3/3B

Period: 7

Classification: actinoid

Electronegativity: unknown

Most common oxidation states: 3

Protons: 103

Electrons: 103

Neutrons: 159

Standard state at 20°C: solid

Atomic number: 104

Name: Rutherfordium

Symbol: Rf

Average Atomic Mass (amu): [267] no stable isotopes

Group: 4/4B

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 104

Electrons: 104

Neutrons: 163

Standard state at 20°C: solid

Atomic number: 105

Name: Dubnium

Symbol: Db

Average Atomic Mass (amu): [268] no stable isotopes

Group: 5/5B

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 105

Electrons: 105

Neutrons: 163

Standard state at 20°C: solid

Atomic number: 106

Name: Seaborgium

Symbol: Sg

Average Atomic Mass (amu): [269] no stable isotopes

Group: 6/6B

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 106

Electrons: 106

Neutrons: 163

Standard state at 20°C: solid

Atomic number: 107

Name: Bohrium

Symbol: Bh

Average Atomic Mass (amu): [270] no stable isotopes



Group: 7/7B

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 107

Electrons: 107

Neutrons: 163

Standard state at 20°C: solid

Atomic number: 108

Name: Hassium

Symbol: Hs

Average Atomic Mass (amu): [269] no stable isotopes

Group: 8/8B

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 108

Electrons: 108

Neutrons: 161

Standard state at 20°C: solid

Atomic number: 109

Name: Meitnerium

Symbol: Mt

Average Atomic Mass (amu): [278] no stable isotopes

Group: 9/8B

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 109

Electrons: 109

Neutrons: 169

Standard state at 20°C: solid

Atomic number: 110

Name: Darmstadtium

Symbol: Ds

Average Atomic Mass (amu): [281] no stable isotopes

Group: 10/8B

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 110

Electrons: 110

Neutrons: 171

Standard state at 20°C: solid

Atomic number: 111

Name: Roentgenium

Symbol: Rg

Average Atomic Mass (amu): [280] no stable isotopes

Group: 11/1A

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 111

Electrons: 111

Neutrons: 169

Standard state at 20°C: solid

Atomic number: 112

Name: Copernicium

Symbol: Cn

Average Atomic Mass (amu): [285] no stable isotopes

Group: 12/2B

Period: 7

Classification: transition metal

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 112

Electrons: 112

Neutrons: 173

Standard state at 20°C: solid

Atomic number: 113

Name: Nihonium

Symbol: Nh

Average Atomic Mass (amu): [286] no stable isotopes

Group: 13/3A

Period: 7

Classification: unknown

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 113

Electrons: 113

Neutrons: 173

Standard state at 20°C: solid

Atomic number: 114

Name: Flerovium

Symbol: Fl

Average Atomic Mass (amu): [289] no stable isotopes

Group: 14/4A

Period: 7

Classification: unknown

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 114

Electrons: 114

Neutrons: 175

Standard state at 20°C: solid

Atomic number: 115

Name: Moscovium

Symbol: Mc

Average Atomic Mass (amu): [289] no stable isotopes

Group: 15/5A

Period: 7

Classification: unknown

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 115

Electrons: 115

Neutrons: 174

Standard state at 20°C: solid

Atomic number: 116

Name: Livermorium

Symbol: Lv

Average Atomic Mass (amu): [293] no stable isotopes

Group: 16/6A

Period: 7

Classification: unknown

Electronegativity: unknown

Most common oxidation states:

Protons: 116

Electrons: 116

Neutrons: 177

Standard state at 20°C: solid

Atomic number: 117

Name: Tennessine

Symbol: Ts

Average Atomic Mass (amu): [294] no stable isotopes

Group: 17/7A

Period: 7

Classification: unknown

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 117

Electrons: 117

Neutrons: 177

Standard state at 20°C: solid

Atomic number: 118

Name: Oganesson

Symbol: Og

Average Atomic Mass (amu): [294] no stable isotopes

Group: 18/8A

Period: 7

Classification: unknown

Electronegativity: unknown

Most common oxidation states: unknown

Protons: 118

Electrons: 118

Neutrons: 176

Standard state at 20°C: solid