

The Periodic Table of the Elements

group 1

1

1.00794

1312.0 2.20

1

H

Hydrogen

1s¹

2

6.941

520.2 0.98

3

Li

Lithium

1s² 2s¹

9.012182

899.5 1.57

4

Be

Beryllium

1s² 2s²

22.98976

495.8 0.93

11

Na

Sodium

[Ne] 3s¹

24.3050

737.7 1.31

12

Mg

Magnesium

[Ne] 3s²

39.0983

418.8 0.82

19

K

Potassium

[Ar] 4s¹

40.078

589.8 1.00

20

Ca

Calcium

[Ar] 4s²

44.95591

633.1 1.36

21

Sc

Scandium

[Ar] 3d¹ 4s²

47.867

658.8 1.54

22

Ti

Titanium

[Ar] 3d² 4s²

50.9415

650.9 1.63

23

V

Vanadium

[Ar] 3d³ 4s²

51.9962

652.9 1.66

24

Cr

Chromium

[Ar] 3d⁵ 4s¹

54.93804

717.3 1.55

25

Mn

Manganese

[Ar] 3d⁵ 4s²

55.845

762.5 1.83

26

Fe

Iron

[Ar] 3d⁶ 4s²

58.93319

760.4 1.91

27

Co

Cobalt

[Ar] 3d⁷ 4s²

58.6934

737.1 1.88

28

Ni

Nickel

[Ar] 3d⁸ 4s²

63.546

745.5 1.90

29

Cu

Copper

[Ar] 3d¹⁰ 4s¹

65.38

906.4 1.65

30

Zn

Zinc

[Ar] 3d¹⁰ 4s²

69.723

578.8 1.81

31

Ga

Gallium

[Ar] 3d¹⁰ 4s² 4p¹

72.64

762.0 2.01

32

Ge

Germanium

[Ar] 3d¹⁰ 4s² 4p²

74.92160

947.0 2.18

33

As

Arsenic

[Ar] 3d¹⁰ 4s² 4p³

78.96

941.0 2.55

34

Se

Selenium

[Ar] 3d¹⁰ 4s² 4p⁴

79.904

1139.9 2.96

35

Br

Bromine

[Ar] 3d¹⁰ 4s² 4p⁵

83.798

1350.8 3.00

36

Kr

Krypton

[Ar] 3d¹⁰ 4s² 4p⁶

85.4678

403.0 0.82

37

Rb

Rubidium

[Kr] 5s¹

87.62

549.5 0.95

38

Sr

Strontium

[Kr] 5s²

88.90585

600.0 1.22

39

Y

Yttrium

[Kr] 4d¹ 5s²

91.224

640.1 1.33

40

Zr

Zirconium

[Kr] 4d² 5s²

92.90638

650.9 1.60

41

Nb

Niobium

[Kr] 4d⁴ 5s¹

95.96

684.3 2.16

42

Mo

Molybdenum

[Kr] 4d⁵ 5s¹

(98)

702.0 1.90

43

Tc

Technetium

[Kr] 4d⁵ 5s²

101.07

710.2 2.20

44

Ru

Ruthenium

[Kr] 4d⁷ 5s¹

102.9055

719.1 2.20

45

Rh

Rhodium

[Kr] 4d⁸ 5s¹

106.42

804.4 2.20

46

Pd

Palladium

[Kr] 4d¹⁰

107.8682

891.0 1.93

47

Ag

Silver

[Kr] 4d¹⁰ 5s¹

112.411

867.8 1.49

48

Cd

Cadmium

[Kr] 4d¹⁰ 5s²

114.818

558.3 1.78

49

In

Indium

[Kr] 4d¹⁰ 5s² 5p¹

118.710

708.4 1.96

50

Sn

Tin

[Kr] 4d¹⁰ 5s² 5p²

121.760

834.0 2.05

51

Sb

Antimony

[Kr] 4d¹⁰ 5s² 5p³

127.60

869.3 2.10

52

Te

Tellurium

[Kr] 4d¹⁰ 5s² 5p⁴

126.9044

1008.4 2.66

53

I

Iodine

[Kr] 4d¹⁰ 5s² 5p⁵

131.293

1170.4 2.60

54

Xe

Xenon

[Kr] 4d¹⁰ 5s² 5p⁶

132.9054

375.7 0.79

55

Cs

Cesium

[Xe] 6s¹

137.327

502.9 0.89

56

Ba

Barium

[Xe] 6s²

174.9668

523.5 1.27

71

Lu

Lutetium

[Xe] 4f¹⁴ 5d¹ 6s²

178.49

658.5 1.37

72

Hf

Hafnium

[Xe] 4f¹⁴ 5d² 6s²

180.9478

761.0 1.50

73

Ta

Tantalum

[Xe] 4f¹⁴ 5d³ 6s²

183.84

770.0 2.36

74

W

Tungsten

[Xe] 4f¹⁴ 5d⁴ 6s²

186.207

769.0 1.90

75

Re

Rhenium

[Xe] 4f¹⁴ 5d⁵ 6s²

190.23

840.0 2.20

76

Os

Osmium

[Xe] 4f¹⁴ 5d⁶ 6s²

192.22

890.0 2.20

77

Ir

Iridium

[Xe] 4f¹⁴ 5d⁷ 6s²

195.084

870.0 2.28

78

Pt

Platinum

[Xe] 4f¹⁴ 5d⁹ 6s¹

196.9665

891.0 2.54

79

Au

Gold

[Xe] 4f¹⁴ 5d¹⁰ 6s¹

200.59

1007.0 2.51

80

Hg

Mercury

[Xe] 4f¹⁴ 5d¹⁰ 6s²

204.3833

589.4 1.62

81

Tl

Thallium

[Xe] 4f¹⁴ 5d¹⁰ 6s² 6p¹

207.2

703.0 2.02

82

Pb

Lead

[Xe] 4f¹⁴ 5d¹⁰ 6s² 6p²

208.9804

715.6 2.33

83

Bi

Bismuth

[Xe] 4f¹⁴ 5d¹⁰ 6s² 6p³

210

812.0 2.00

84

Po

Polonium

[Xe] 4f¹⁴ 5d¹⁰ 6s² 6p⁴

(210)

(810) 2.00

85

At

Astatine

[Xe] 4f¹⁴ 5d¹⁰ 6s² 6p⁵

(220)

(1037.0)

86

Rn

Radon

[Xe] 4f¹⁴ 5d¹⁰ 6s² 6p⁶

(223)

380.0 0.70

87

Fr

Francium

[Rn] 7s¹

(226)

509.3 0.90

88

Ra

Radium

[Rn] 7s²

(262)

580.0

103

Lr

Lawrencium

[Rn] 5f¹⁴ 7s² 7p¹

(261)

580.0

104

Rf

Rutherfordium

[Rn] 5f¹⁴ 7s² 7p²

(262)

580.0

105

Db

Dubnium

[Rn] 5f¹⁴ 7s² 7p³

(266)

580.0

106

Sg

Seaborgium

[Rn] 5f¹⁴ 7s² 7p⁴

(264)

580.0

107

Bh

Bohrium

[Rn] 5f¹⁴ 7s² 7p⁵

(277)

580.0

108

Hs

Hassium

[Rn] 5f¹⁴ 7s² 7p⁶

(268)

580.0

109

Mt

Meitnerium

[Rn] 5f¹⁴ 7s² 7p⁷

(271)

580.0

110

Ds

Darmstadtium

[Rn] 5f¹⁴ 7s² 7p⁸

(272)

580.0

111

Rg

Roentgenium

[Rn] 5f¹⁴ 7s² 7p⁹

(285)

580.0

112

Cn

Copernicium

[Rn] 5f¹⁴ 7s² 7p¹⁰

(284)

580.0

113

Uut

Ununtrium

[Rn] 5f¹⁴ 7s² 7p¹¹

(289)

580.0

114

Uuq

Ununquadium

[Rn] 5f¹⁴ 7s² 7p¹²

(288)

580.0

115

Uup

Ununpentium

[Rn] 5f¹⁴ 7s² 7p¹³

(292)

580.0

116

Uuh

Ununhexium

[Rn] 5f¹⁴ 7s² 7p¹⁴

(291)

580.0

117

Uus

Ununseptium

[Rn] 5f¹⁴ 7s² 7p¹⁵

(294)

580.0

118

Uuo

Ununoctium

[Rn] 5f¹⁴ 7s² 7p¹⁶

atomic mass

or most stable mass number

1st ionization energy in kJ/mol

chemical symbol

name

electron configuration

atomic number

electronegativity

oxidation states

most common are bold

alkali metals

alkaline metals

other metals

transition metals

lanthanoids

actinoids

metalloids

nonmetals

halogens

noble gases

unknown elements

radioactive elements have masses in parenthesis

13

10.811

800.6 2.04

5

B

Boron

1s² 2s² 2p¹

12.0107

1086.5 2.55

6

C

Carbon

1s² 2s² 2p²

14.0067

1402.3 3.04

7

N

Nitrogen

1s² 2s² 2p³

15.9994

1313.9 3.44

8

O

Oxygen

1s² 2s² 2p⁴

18.998403

1681.0 3.98

9

F

Fluorine

1s² 2s² 2p⁵

20.1797

2080.7

10

Ne

Neon

1s² 2s² 2p⁶

26.98153

577.5 1.61

13

Al

Aluminium

[Ne] 3s² 3p¹

28.0855

786.5 1.90

14

Si

Silicon

[Ne] 3s² 3p²

30.97696

1011.8 2.19

15

P

Phosphorus

[Ne] 3s² 3p³

32.065

999.6 2.58

16

S

Sulfur

[Ne] 3s² 3p⁴

35.453

1251.2 3.16

17

Cl

Chlorine

[Ne] 3s² 3p⁵

39.948

1520.6

18

Ar

Argon

[Ne] 3s² 3p⁶

72.64

762.0 2.01

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Ge

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Xenon

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By Robert Compston version 1.4

period 1

2

3

4

5

6

7