

THE PERIODIC TABLE

hydrogen

1

H

1.0079

lithium

3

Li

6.941

sodium

11

Na

22.990

potassium

19

K

39.098

rubidium

37

Rb

85.468

caesium

55

Cs

132.91

francium

87

Fr

[223]

beryllium

4

Be

9.0122

magnesium

12

Mg

24.305

calcium

20

Ca

40.078

strontium

38

Sr

87.62

barium

56

Ba

137.33

radium

88

Ra

[226]

57-70

★

89-102

★ ★

scandium

21

Sc

44.956

yttrium

39

Y

88.906

lutetium

71

Lu

174.97

lawrencium

103

Lr

[262]

titanium

22

Ti

47.867

zirconium

40

Zr

91.224

hafnium

72

Hf

178.49

rutherfordium

104

Rf

[261]

vanadium

23

V

50.942

niobium

41

Nb

92.906

tantalum

73

Ta

180.95

dubnium

105

Db

[262]

chromium

24

Cr

51.996

molybdenum

42

Mo

95.94

tungsten

74

W

183.84

seaborgium

106

Sg

[266]

manganese

25

Mn

54.938

technetium

43

Tc

[98]

rhennium

75

Re

186.21

bohrium

107

Bh

[264]

iron

26

Fe

55.845

ruthenium

44

Ru

101.07

osmium

76

Os

190.23

hassium

108

Hs

[269]

cobalt

27

Co

58.933

rhodium

45

Rh

102.91

iridium

77

Ir

192.22

meitnerium

109

Mt

[268]

nickel

28

Ni

58.693

palladium

46

Pd

106.42

platinum

78

Pt

195.08

ununnium

110

Uun

[271]

copper

29

Cu

63.546

silver

47

Ag

107.87

gold

79

Au

196.97

ununium

111

Uuu

[272]

zinc

30

Zn

65.39

cadmium

48

Cd

112.41

mercury

80

Hg

200.59

ununium

112

Uub

[277]

boron

5

B

10.811

aluminum

13

Al

26.982

gallium

31

Ga

69.723

thallium

81

Tl

204.38

carbon

6

C

12.011

silicon

14

Si

28.086

germanium

32

Ge

72.61

lead

82

Pb

207.2

ununquadium

114

Uuq

[289]

nitrogen

7

N

14.007

phosphorus

15

P

30.974

arsenic

33

As

74.922

bismuth

83

Bi

208.98

oxygen

8

O

15.999

sulfur

16

S

32.065

selenium

34

Se

78.96

polonium

84

Po

[209]

fluorine

9

F

18.998

chlorine

17

Cl

35.453

astatine

85

At

[210]

helium

2

He

4.0026

neon

10

Ne

20.180

argon

18

Ar

39.948

krypton

36

Kr

83.80

xenon

54

Xe

131.29

radon

86

Rn

[222]

name

Proton number

Chemical symbol

Relative atomic mass
(total number of protons and neutrons)

magnesium
 12
Mg
 24.305

name
 Proton number
 Chemical symbol
 Relative atomic mass
 (total number of protons and neutrons)

* Lanthanide series

** Actinide series

lanthanum 57 La 138.91	cerium 58 Ce 140.12	praseodymium 59 Pr 140.91	neodymium 60 Nd 144.24	promethium 61 Pm [145]	samarium 62 Sm 150.36	europium 63 Eu 151.96	gadolinium 64 Gd 157.25	terbium 65 Tb 158.93	dysprosium 66 Dy 162.50	holmium 67 Ho 164.93	erbium 68 Er 167.26	thulium 69 Tm 168.93	ytterbium 70 Yb 173.04
actinium 89 Ac [227]	thorium 90 Th 232.04	protactinium 91 Pa 231.04	uranium 92 U 238.03	neptunium 93 Np [237]	plutonium 94 Pu [244]	americium 95 Am [243]	curium 96 Cm [247]	berkelium 97 Bk [247]	californium 98 Cf [251]	einsteinium 99 Es [252]	fermium 100 Fm [257]	mendelevium 101 Md [258]	nobelium 102 No [259]

TOP TIP: every atom has the same number of protons and electrons

TOP TIP: The number of neutrons in an atom can be calculated by subtracting the proton number from the relative atomic mass.