

PERIODIC TABLE OF THE ELEMENTS

1

IA

1A

1

H

Hydrogen

$1s^1$

2

IIA

2A

2

He

Helium

$1s^2$

3

IIIB

3B

3

Li

Lithium

$1s^2 2s^1$

4

IVB

4B

4

Be

Beryllium

$1s^2 2s^2$

5

VB

5B

5

B

Boron

$1s^2 2s^2 2p^1$

6

VIB

6B

6

C

Carbon

$1s^2 2s^2 2p^2$

7

VIIB

7B

7

N

Nitrogen

$1s^2 2s^2 2p^3$

8

VIII

8

8

O

Oxygen

$1s^2 2s^2 2p^4$

9

VIII

9

9

F

Fluorine

$1s^2 2s^2 2p^5$

10

VIII

10

10

Ne

Neon

$1s^2 2s^2 2p^6$

11

IB

1B

11

Na

Sodium

$1s^2 2s^2 2p^6 3s^1$

12

IIB

2B

12

Mg

Magnesium

$1s^2 2s^2 2p^6 3s^2$

13

IIIA

3A

13

Al

Aluminum

$1s^2 2s^2 2p^6 3s^2 3p^1$

14

IVA

4A

14

Si

Silicon

$1s^2 2s^2 2p^6 3s^2 3p^2$

15

VA

5A

15

P

Phosphorus

$1s^2 2s^2 2p^6 3s^2 3p^3$

16

VIA

6A

16

S

Sulfur

$1s^2 2s^2 2p^6 3s^2 3p^4$

17

VIIA

7A

17

Cl

Chlorine

$1s^2 2s^2 2p^6 3s^2 3p^5$

18

VIIIA

8A

18

Ar

Argon

$1s^2 2s^2 2p^6 3s^2 3p^6$

19

IB

1B

19

K

Potassium

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$

20

IIB

2B

20

Ca

Calcium

$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$

21

IIIB

3B

21

Sc

Scandium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^1 4s^2$

22

IVB

4B

22

Ti

Titanium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^2 4s^2$

23

VB

5B

23

V

Vanadium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^3 4s^2$

24

VIB

6B

24

Cr

Chromium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^1$

25

VIIB

7B

25

Mn

Manganese

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^2$

26

VIII

8

26

Fe

Iron

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2$

27

VIII

9

27

Co

Cobalt

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 4s^2$

28

VIII

10

28

Ni

Nickel

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^8 4s^2$

29

VIII

11

29

Cu

Copper

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^1$

30

VIII

12

30

Zn

Zinc

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2$

31

IIIA

3A

31

Ga

Gallium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^1$

32

IVA

4A

32

Ge

Germanium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^2$

33

VA

5A

33

As

Arsenic

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^3$

34

VIA

6A

34

Se

Selenium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^4$

35

VIIA

7A

35

Br

Bromine

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^5$

36

VIIIA

8A

36

Kr

Krypton

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6$

37

IB

1B

37

Rb

Rubidium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 5s^1$

38

IIB

2B

38

Sr

Strontium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 5s^2$

39

IIIB

3B

39

Y

Yttrium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^1 5s^2$

40

IVB

4B

40

Zr

Zirconium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^2 5s^2$

41

VB

5B

41

Nb

Niobium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^4 5s^1$

42

VIB

6B

42

Mo

Molybdenum

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^5 5s^1$

43

VIIB

7B

43

Tc

Technetium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^5 5s^2$

44

VIII

8

44

Ru

Ruthenium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^7 5s^1$

45

VIII

9

45

Rh

Rhodium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^8 5s^1$

46

VIII

10

46

Pd

Palladium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10}$

47

IB

1B

47

Ag

Silver

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^1$

48

IIB

2B

48

Cd

Cadmium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2$

49

IIIA

3A

49

In

Indium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^1$

50

IVA

4A

50

Sn

Tin

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^2$

51

VA

5A

51

Sb

Antimony

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^3$

52

VIA

6A

52

Te

Tellurium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^4$

53

VIIA

7A

53

I

Iodine

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^5$

54

VIIIA

8A

54

Xe

Xenon

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6$

55

IB

1B

55

Cs

Cesium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 6s^1$

56

IIB

2B

56

Ba

Barium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 6s^2$

57-71

IIIB

3B

57-71

Lanthanide Series

72

IVB

4B

72

Hf

Hafnium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^2 6s^2$

73

VB

5B

73

Ta

Tantalum

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^3 6s^2$

74

VIB

6B

74

W

Tungsten

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^4 6s^2$

75

VIIB

7B

75

Re

Rhenium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^5 6s^2$

76

VIII

8

76

Os

Osmium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^6 6s^2$

77

VIII

9

77

Ir

Iridium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^7 6s^2$

78

VIII

10

78

Pt

Platinum

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^9 6s^1$

79

IB

1B

79

Au

Gold

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^1$

80

IIB

2B

80

Hg

Mercury

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2$

81

IIIA

3A

81

Tl

Thallium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^1$

82

IVA

4A

82

Pb

Lead

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^2$

83

VA

5A

83

Bi

Bismuth

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^3$

84

VIA

6A

84

Po

Polonium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^4$

85

VIIA

7A

85

At

Astatine

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^5$

86

VIIIA

8A

86

Rn

Radon

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6$

87

IB

1B

87

Fr

Francium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 7s^1$

88

IIB

2B

88

Ra

Radium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 7s^2$

89-103

IIIB

3B

89-103

Actinide Series

104

IVB

4B

104

Rf

Rutherfordium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^2 7s^2$

105

VB

5B

105

Db

Dubnium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^3 7s^2$

106

VIB

6B

106

Sg

Seaborgium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^4 7s^2$

107

VIIB

7B

107

Bh

Bohrium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^5 7s^2$

108

VIII

8

108

Hs

Hassium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^6 7s^2$

109

VIII

9

109

Mt

Meitnerium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^7 7s^2$

110

VIII

10

110

Ds

Darmstadtium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^8 7s^2$

111

IB

1B

111

Rg

Roentgenium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^9 7s^2$

112

IIB

2B

112

Cn

Copernicium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^{10} 7s^2$

113

IIIA

3A

113

Uut

Ununtrium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^{10} 7s^2 7p^1$

114

IVA

4A

114

Fl

Flerovium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^{10} 7s^2 7p^2$

115

VA

5A

115

Uup

Ununpentium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^{10} 7s^2 7p^3$

116

VIA

6A

116

Lv

Livermorium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^{10} 7s^2 7p^4$

117

VIIA

7A

117

Uus

Ununseptium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^{10} 7s^2 7p^5$

118

VIIIA

8A

118

Uuo

Ununoctium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^6 6d^{10} 7s^2 7p^6$

119

IIIB

3B

119

La

Lanthanum

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^1 6s^2$

120

IVB

4B

120

Ce

Cerium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^2 6s^2$

121

VB

5B

121

Pr

Praseodymium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^3 6s^2$

122

VIB

6B

122

Nd

Neodymium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^4 6s^2$

123

VIIB

7B

123

Pm

Promethium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^5 6s^2$

124

VIII

8

124

Sm

Samarium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^6 6s^2$

125

VIII

9

125

Eu

Europium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^7 6s^2$

126

VIII

10

126

Gd

Gadolinium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^8 6s^2$

127

IB

1B

127

Tb

Terbium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^9 6s^2$

128

IIB

2B

128

Dy

Dysprosium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2$

129

IIIA

3A

129

Ho

Holmium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^1$

130

IVA

4A

130

Er

Erbium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^2$

131

VA

5A

131

Tm

Thulium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6 5d^{10} 6s^2 6p^3$

132

VIA

6A

132

Yb

Ytterbium

$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^6 4d^{10} 5s^2 5p^6$