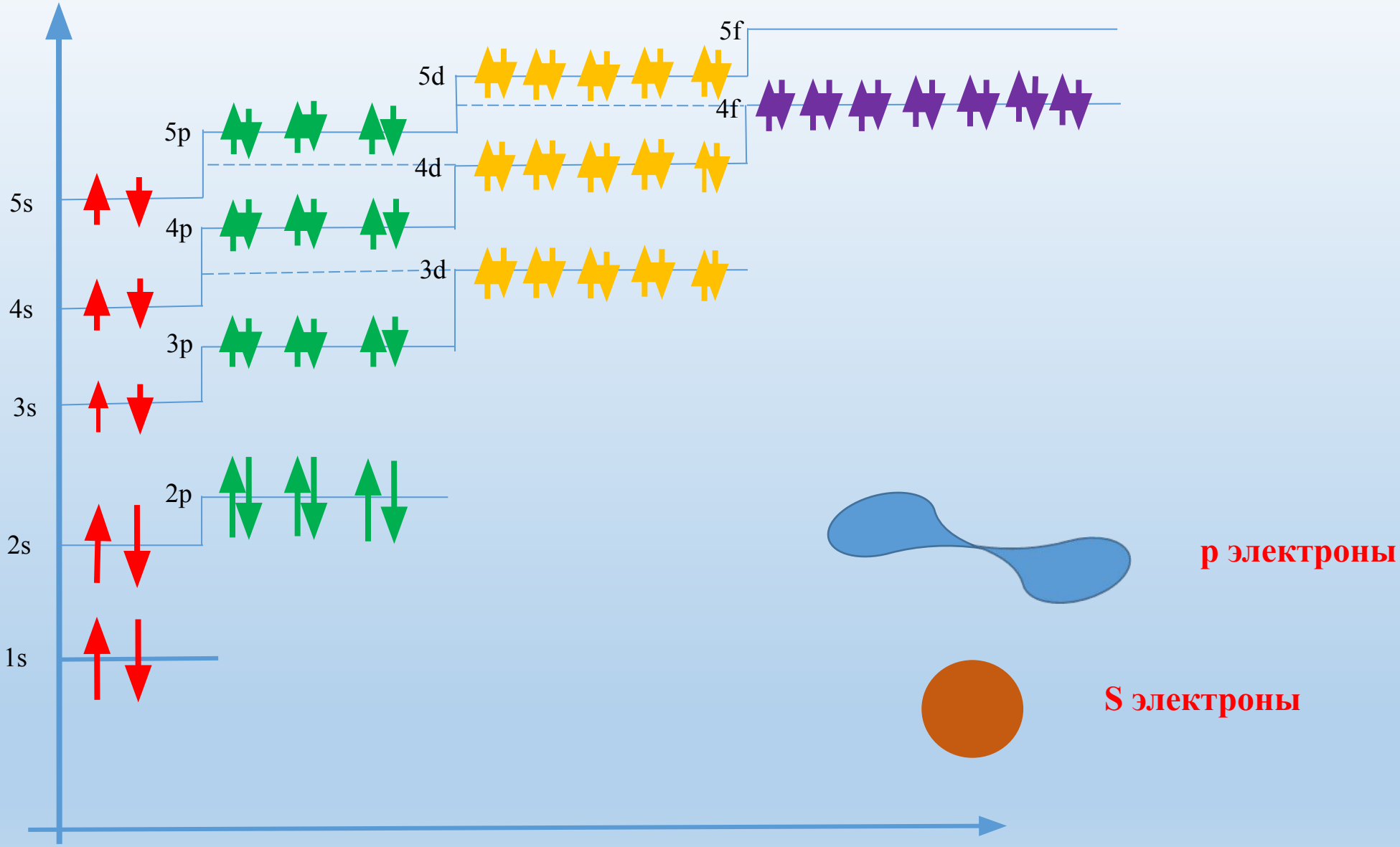
Строение электронных оболочек атомов первого, второго и третьего периодов в Периодической системе химических элементов Д.И.Менделеева

Приложение к учебнику
О.С. Габриелян ХИМИЯ 8 класс
МБОУ Дивненская СОШ
2015 год



p электроны

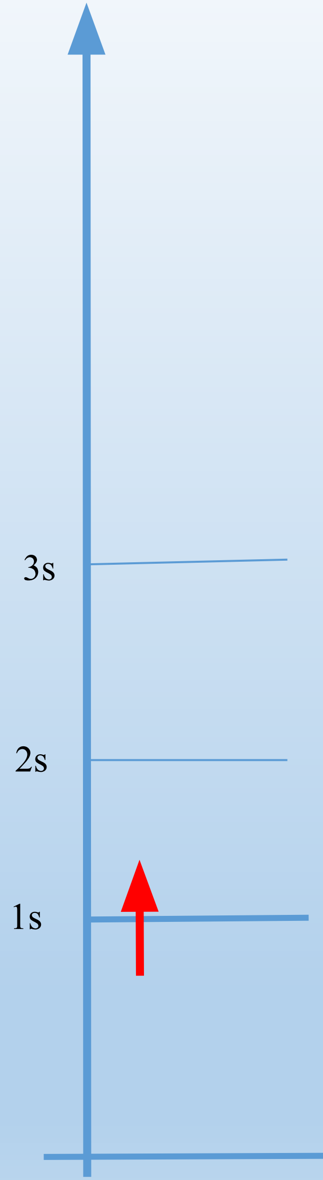
S электроны

Hidrogenium – водород

+ 1 H) 1s^1

1

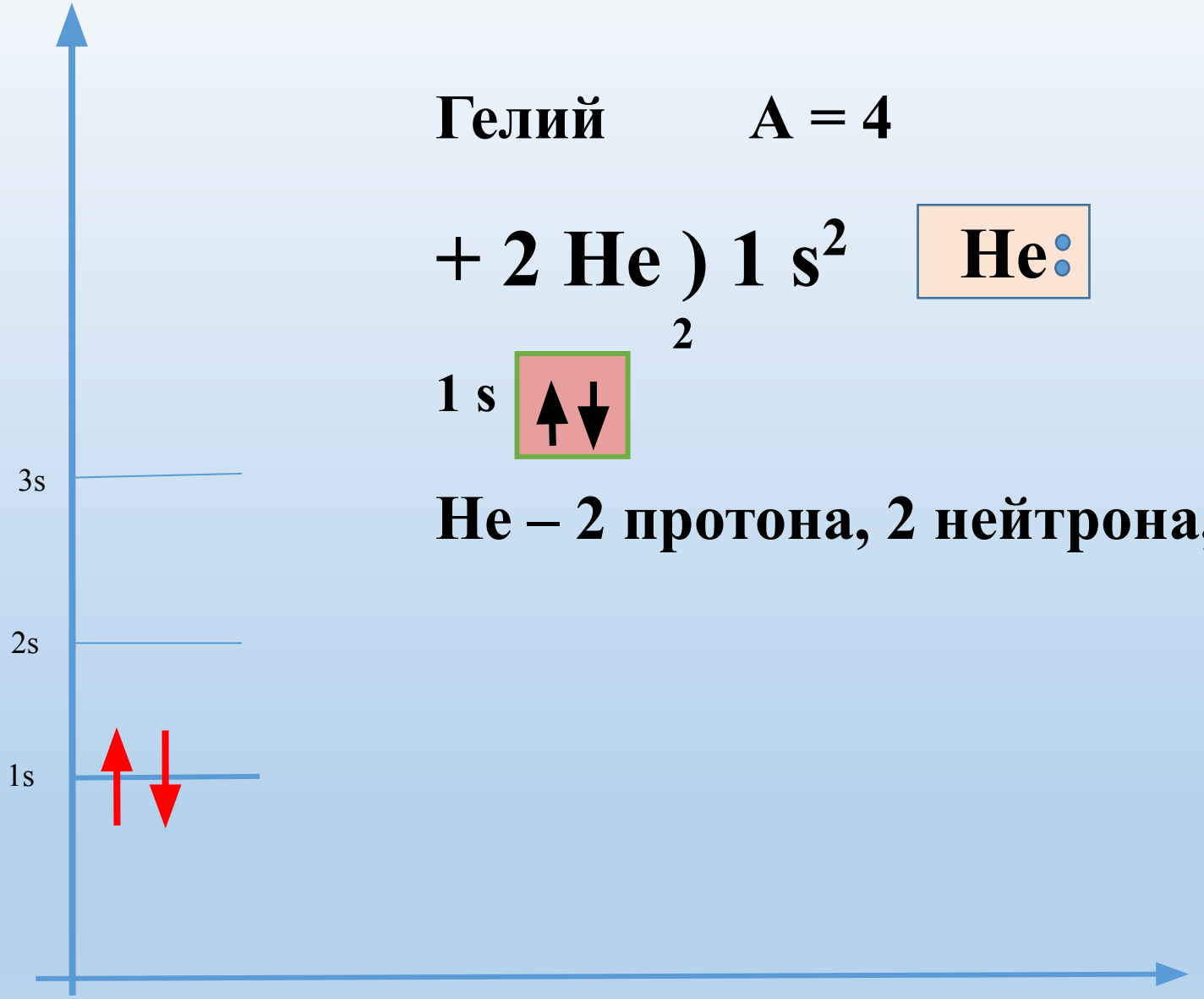
1s [↑]   **·H**



$^{1}_{1}$H – водород **1 протон, 1 электрон A = 1**

$^{1}_{2}$H – дейтерий **1 протон, 1 нейтрон, 1 электрон A = 2**

$^{1}_{3}$H – тритий **1 протон, 2 нейтрона, 1 электрон A = 3**



Гелий A = 4

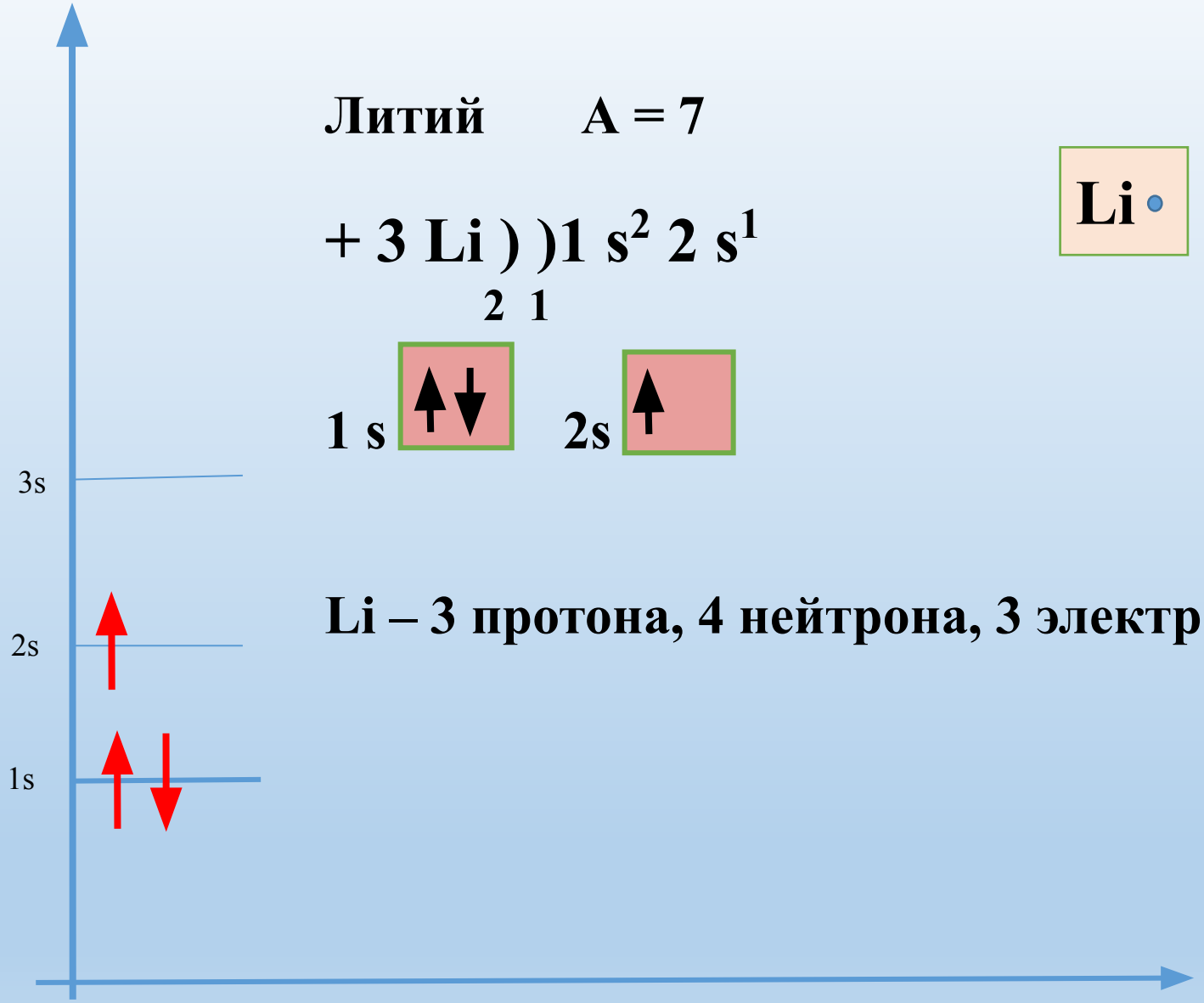
+ 2 He) 1 s^2

2

He:

1 s

He – 2 протона, 2 нейтрона, 2 электрона



Литий A = 7

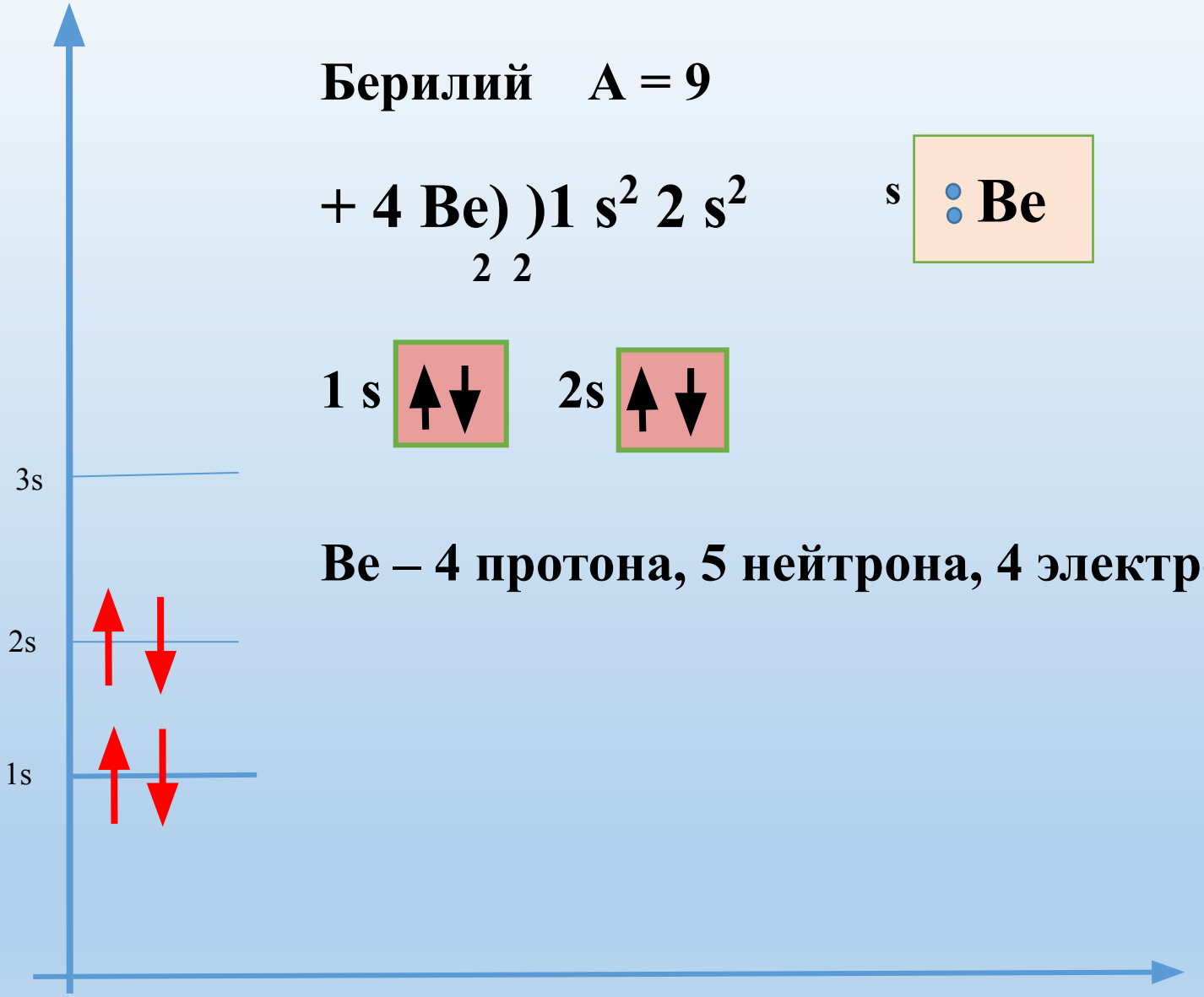
+ 3 Li))1 s^2 2 s^1

2 1

1 s **2s**

Li

Li – 3 протона, 4 нейтрона, 3 электрона



Берилий A = 9

+ 4 Be))1 s^2 2 s^2

2 2

s Be

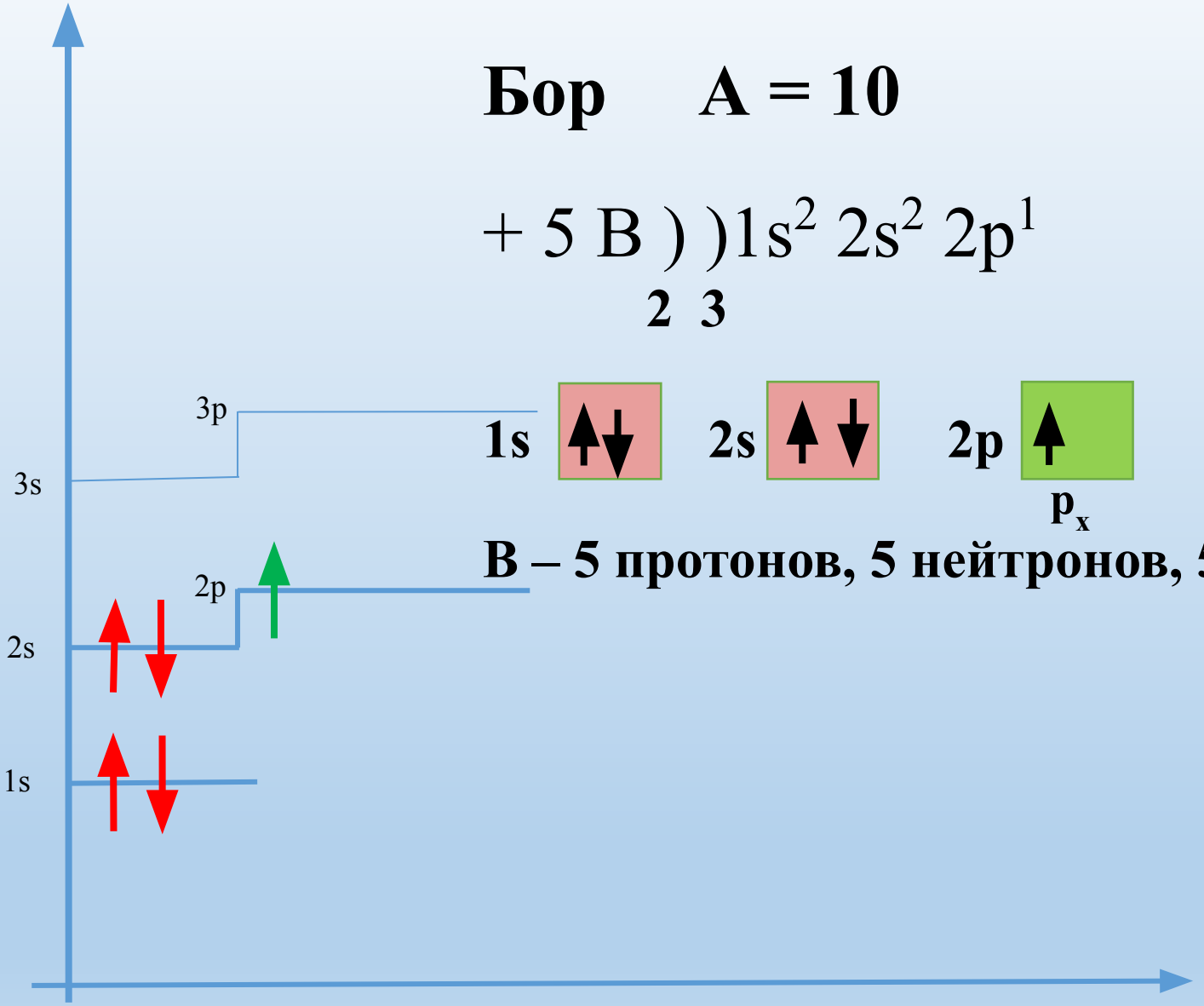
1 s **2s**

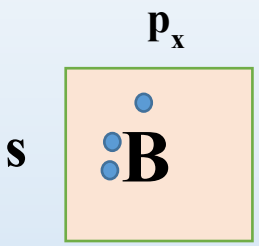
Be – 4 протона, 5 нейтрона, 4 электрона

Бор A = 10

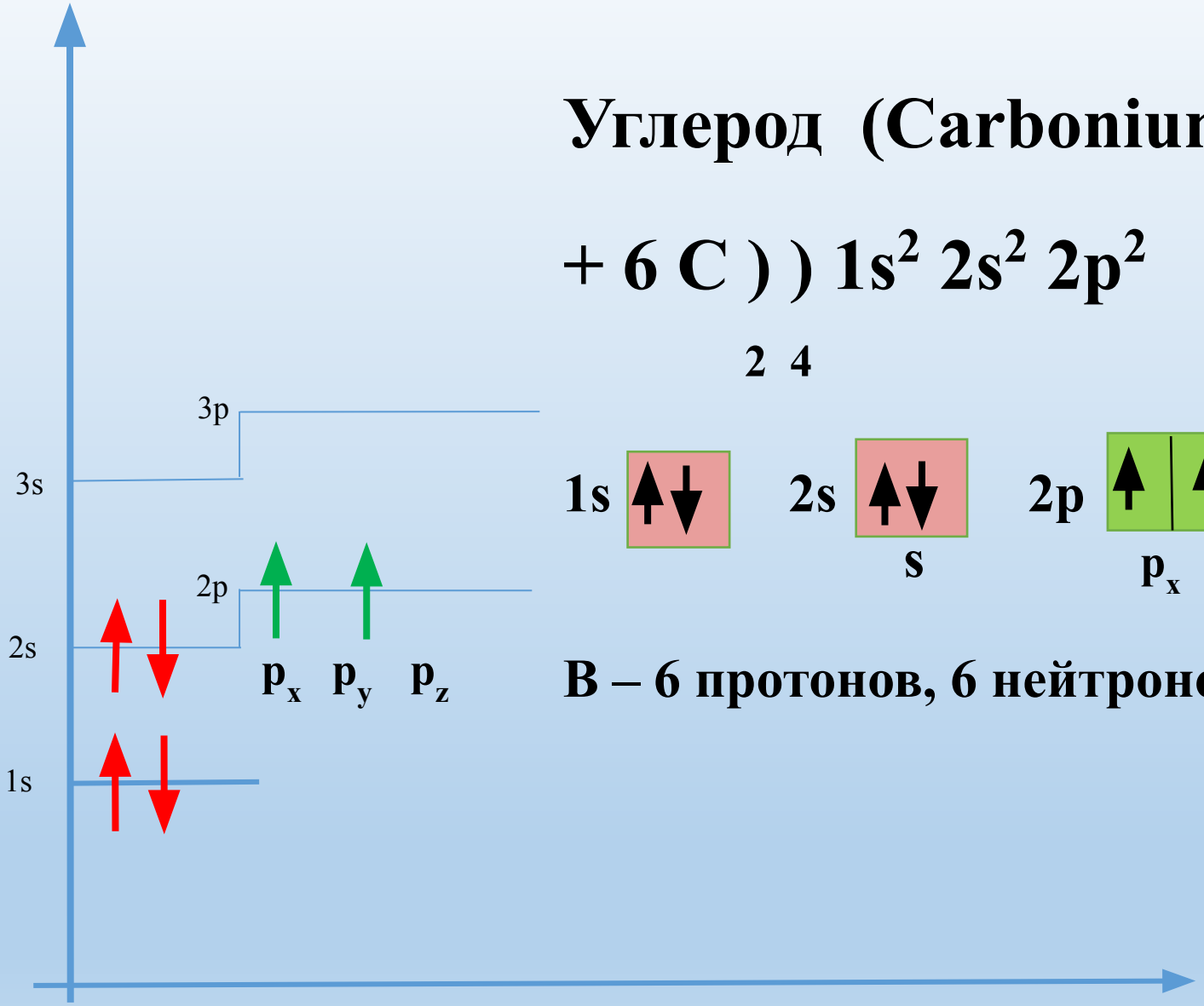
+ 5 B))1s^2 2s^2 2p^1

2 3





B – 5 протонов, 5 нейтронов, 5 электронов



Углерод (Carbonium) A = 12

+ 6 C)) $1s^2\ 2s^2\ 2p^2$

2 4

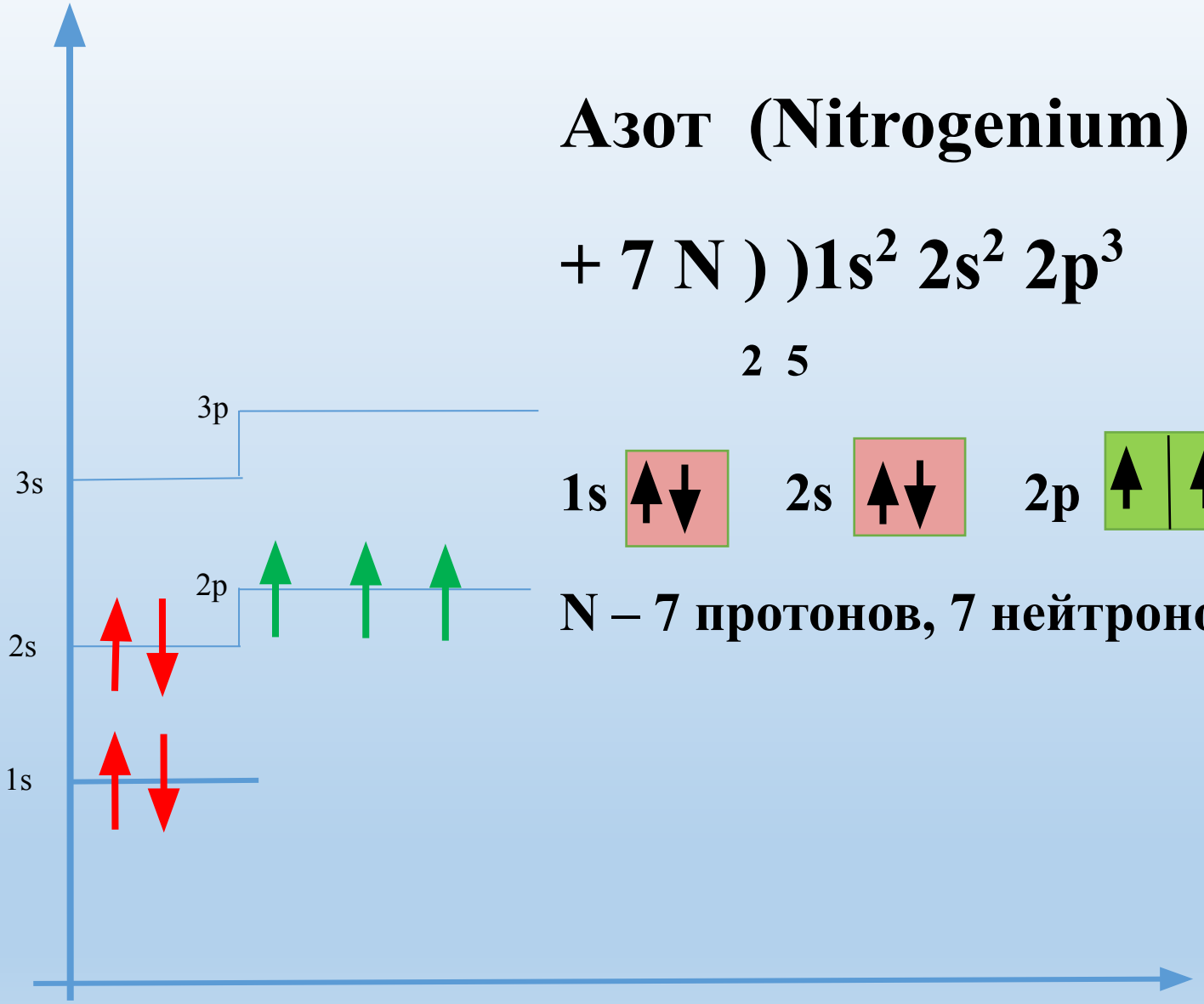
1s 2s 2p

s

p_x p_y p_z

C

B – 6 протонов, 6 нейтронов, 6 электронов

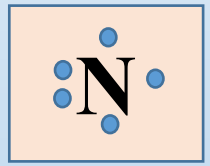


Азот (Nitrogenium) A = 14

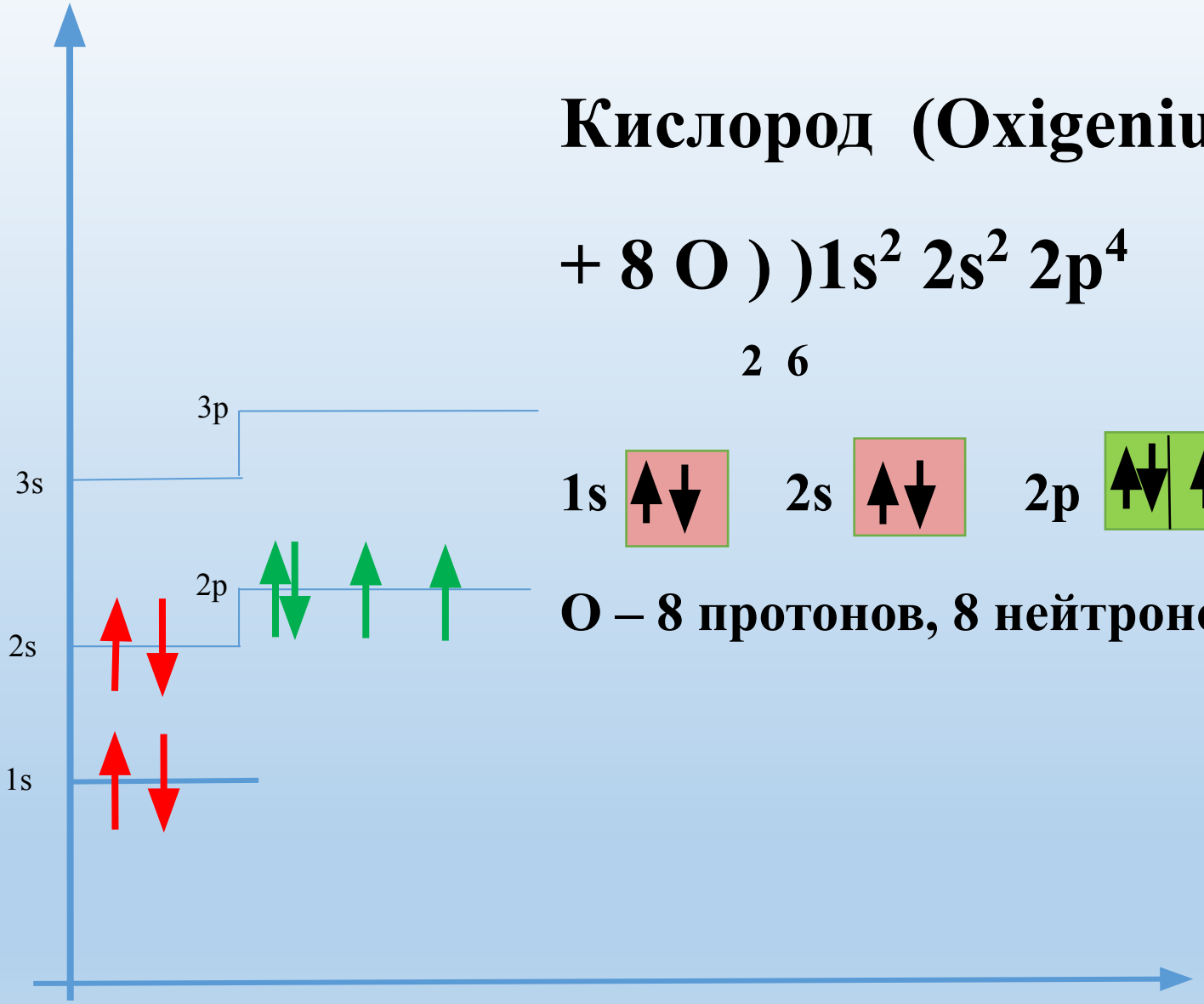
+ 7 N))$1s^2$ $2s^2$ $2p^3$

2 5

1s 2s 2p 



N – 7 протонов, 7 нейтронов, 7 электронов

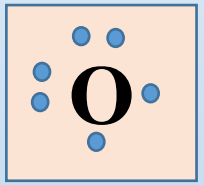


Кислород (Oxigenium) A = 16

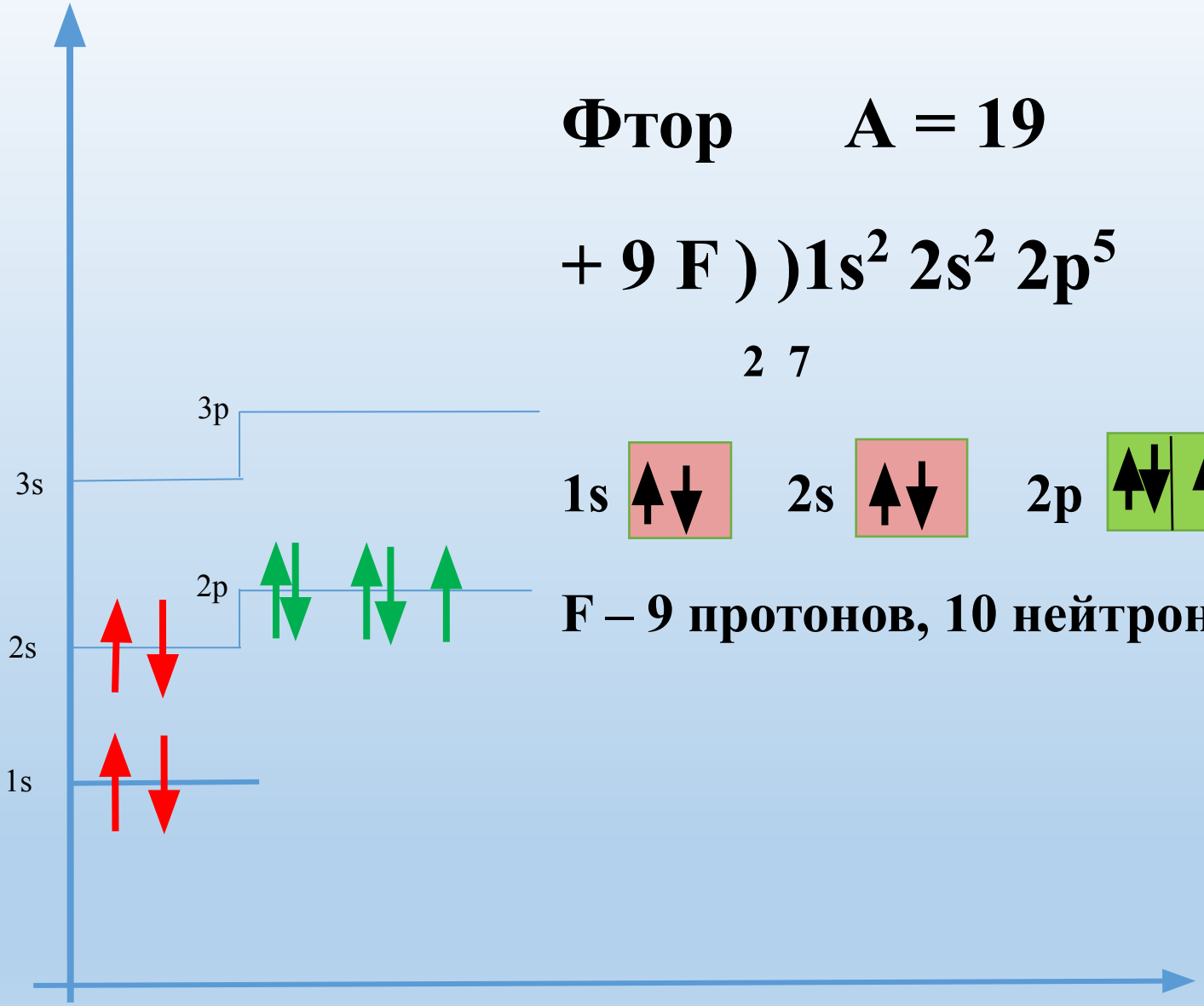
+ 8 O))$1s^2$ $2s^2$ $2p^4$

2 6

1s 2s 2p 



O – 8 протонов, 8 нейтронов, 8 электронов

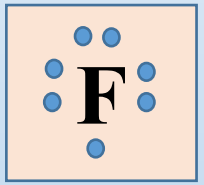


Фтор A = 19

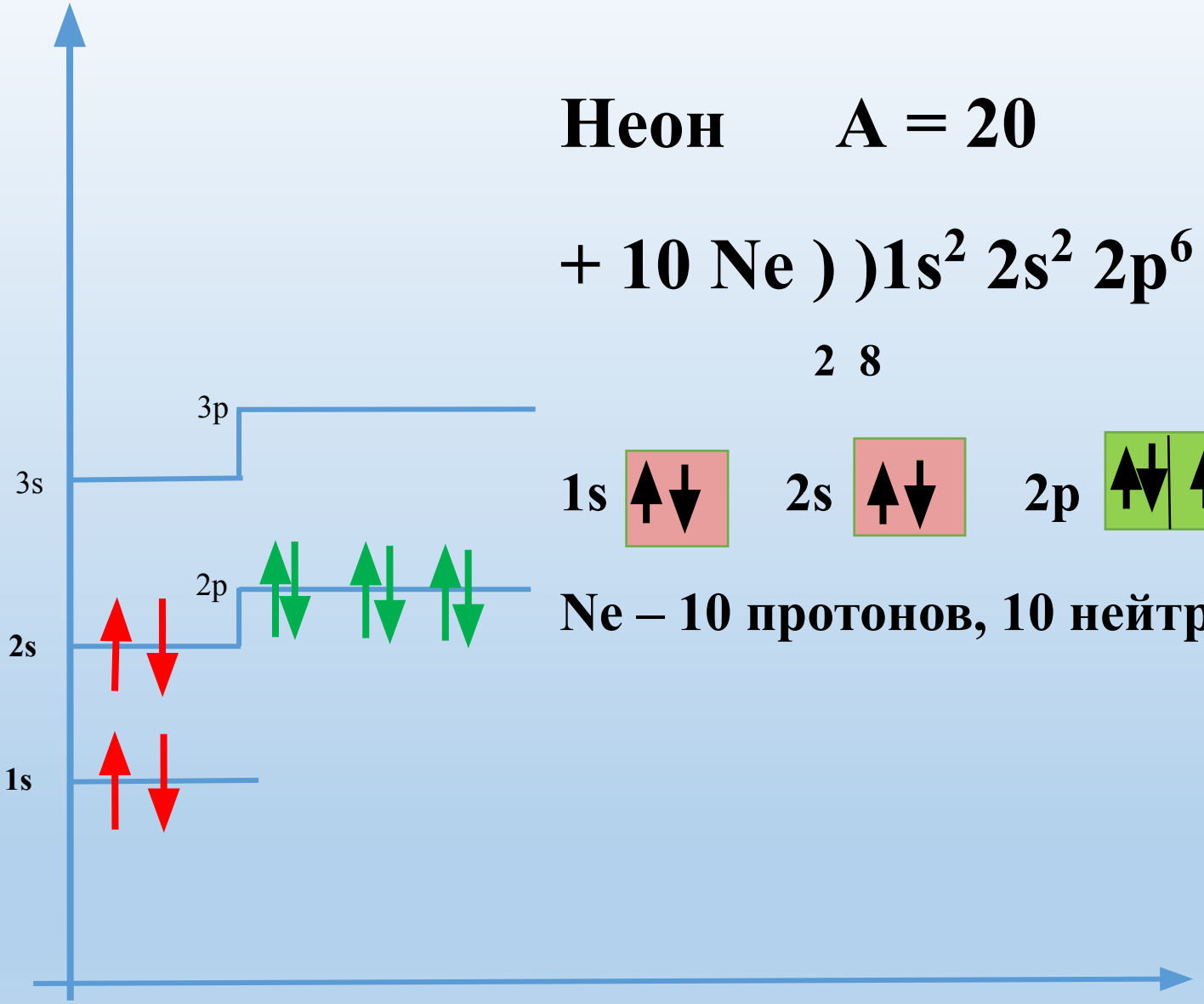
+ 9 F))$1s^2$ $2s^2$ $2p^5$

2 7

1s **2s** **2p**



F – 9 протонов, 10 нейтронов, 9 электронов

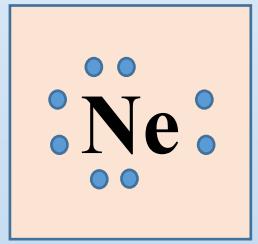


Неон A = 20

+ 10 Ne))$1s^2$ $2s^2$ $2p^6$

2 8

1s **2s** **2p**

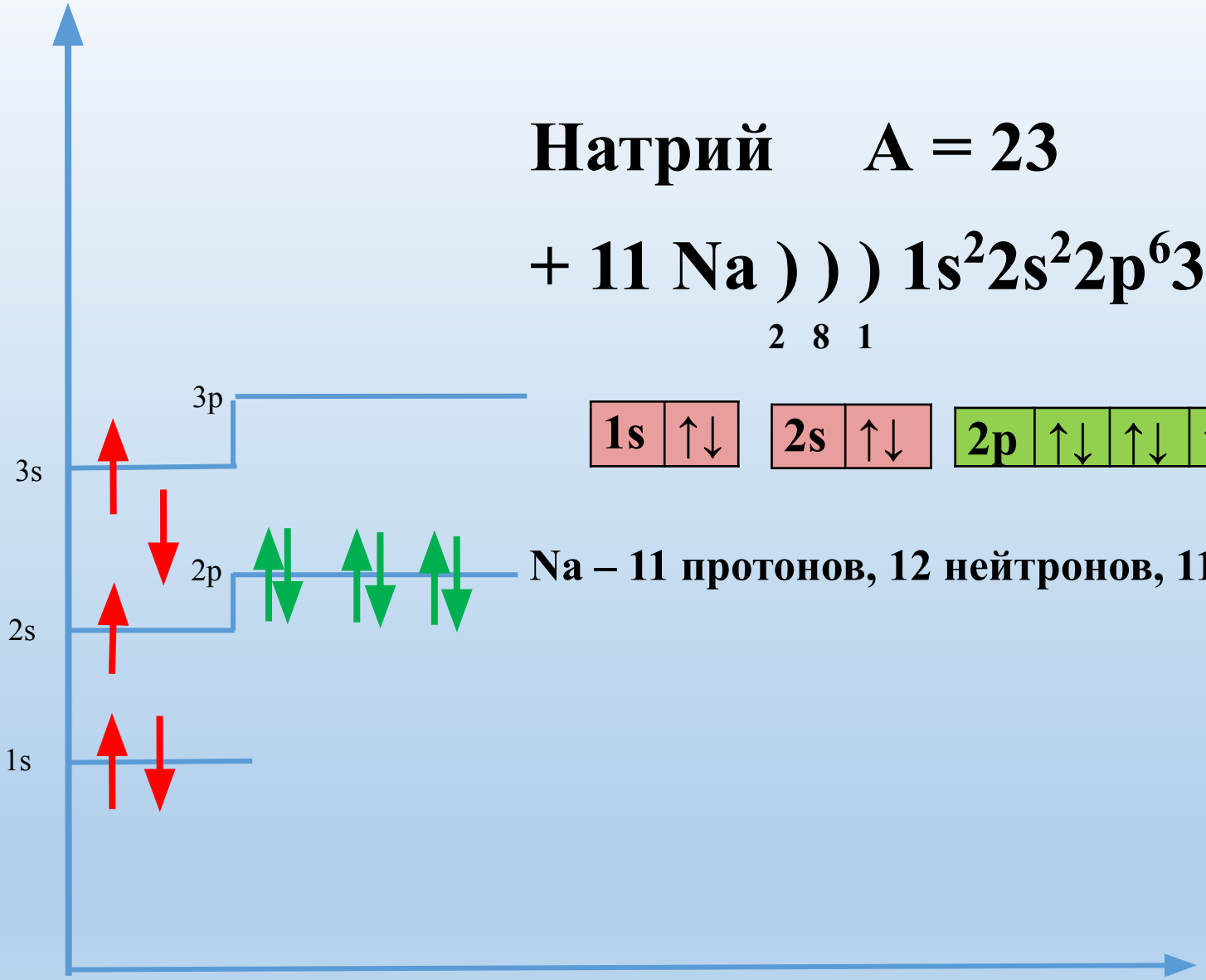


Ne – 10 протонов, 10 нейтронов, 10 электронов

Натрий A = 23

+ 11 Na))) $1s^2 2s^2 2p^6 3s^1$

2 8 1



1s	↑↓	2s	↑↓	2p	↑↓	↑↓	↑↑	3s	↑

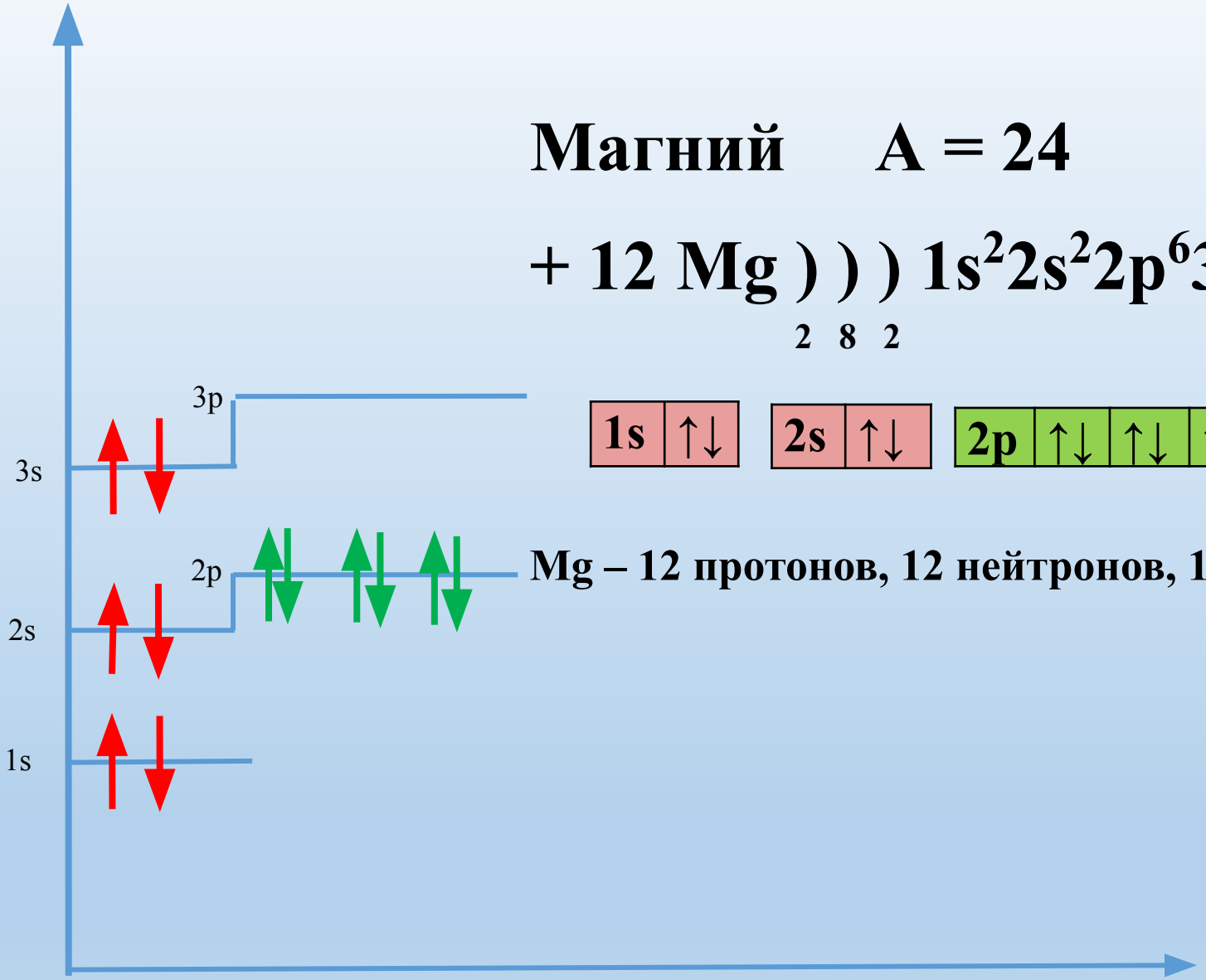
Na – 11 протонов, 12 нейтронов, 11 электронов

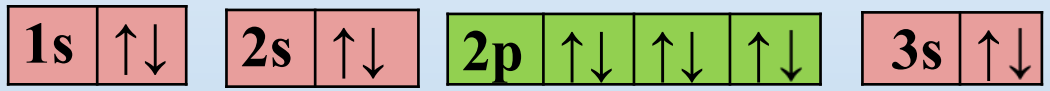
Na

Магний A = 24

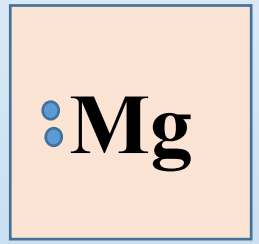
+ 12 Mg))) $1s^2 2s^2 2p^6 3s^2$

2 8 2





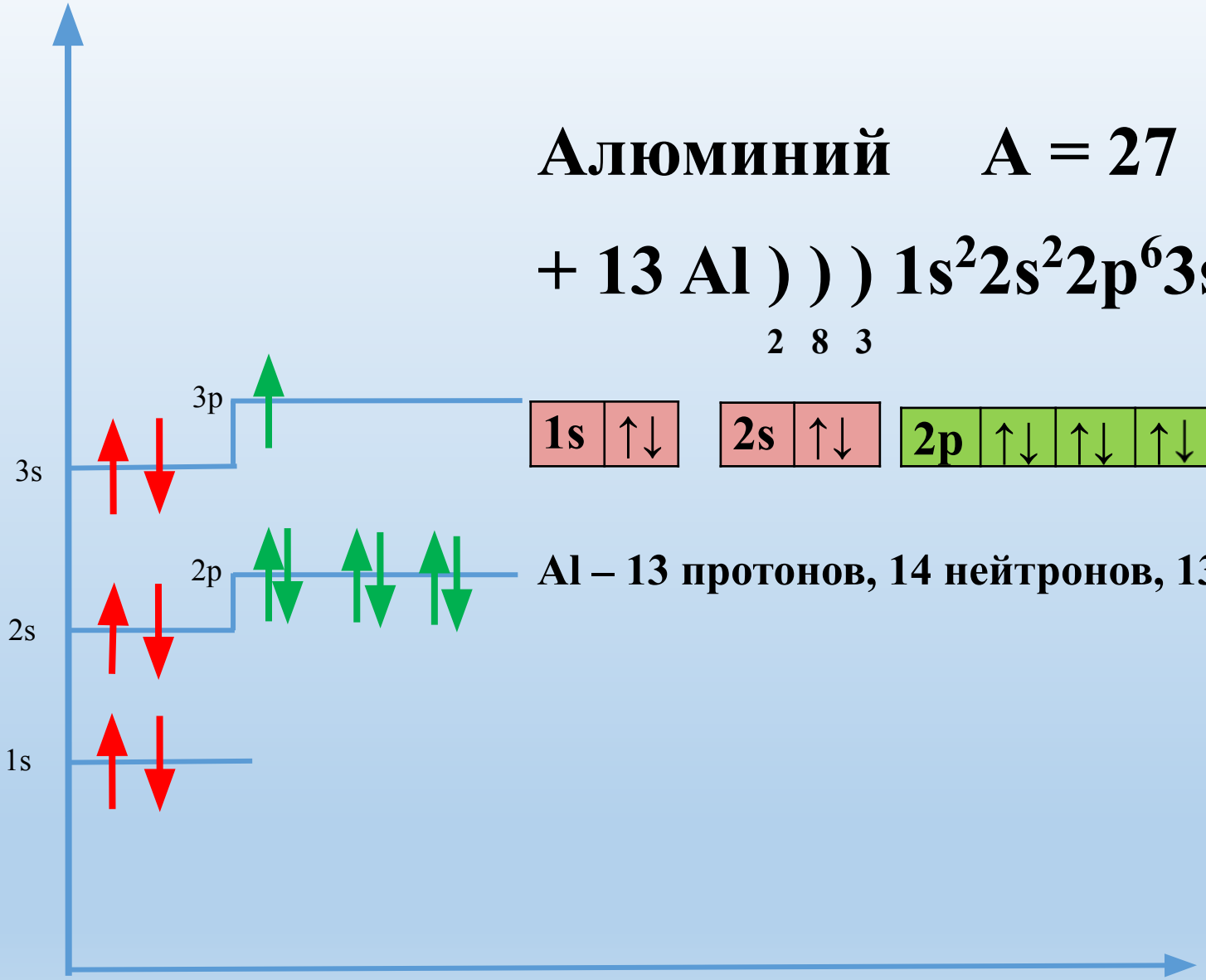
Mg – 12 протонов, 12 нейтронов, 12 электронов

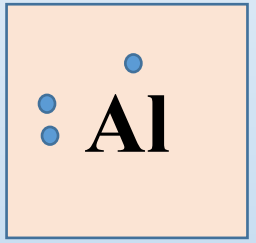


Алюминий A = 27

+ 13 Al))) $1s^2 2s^2 2p^6 3s^2 3p^1$

2 8 3



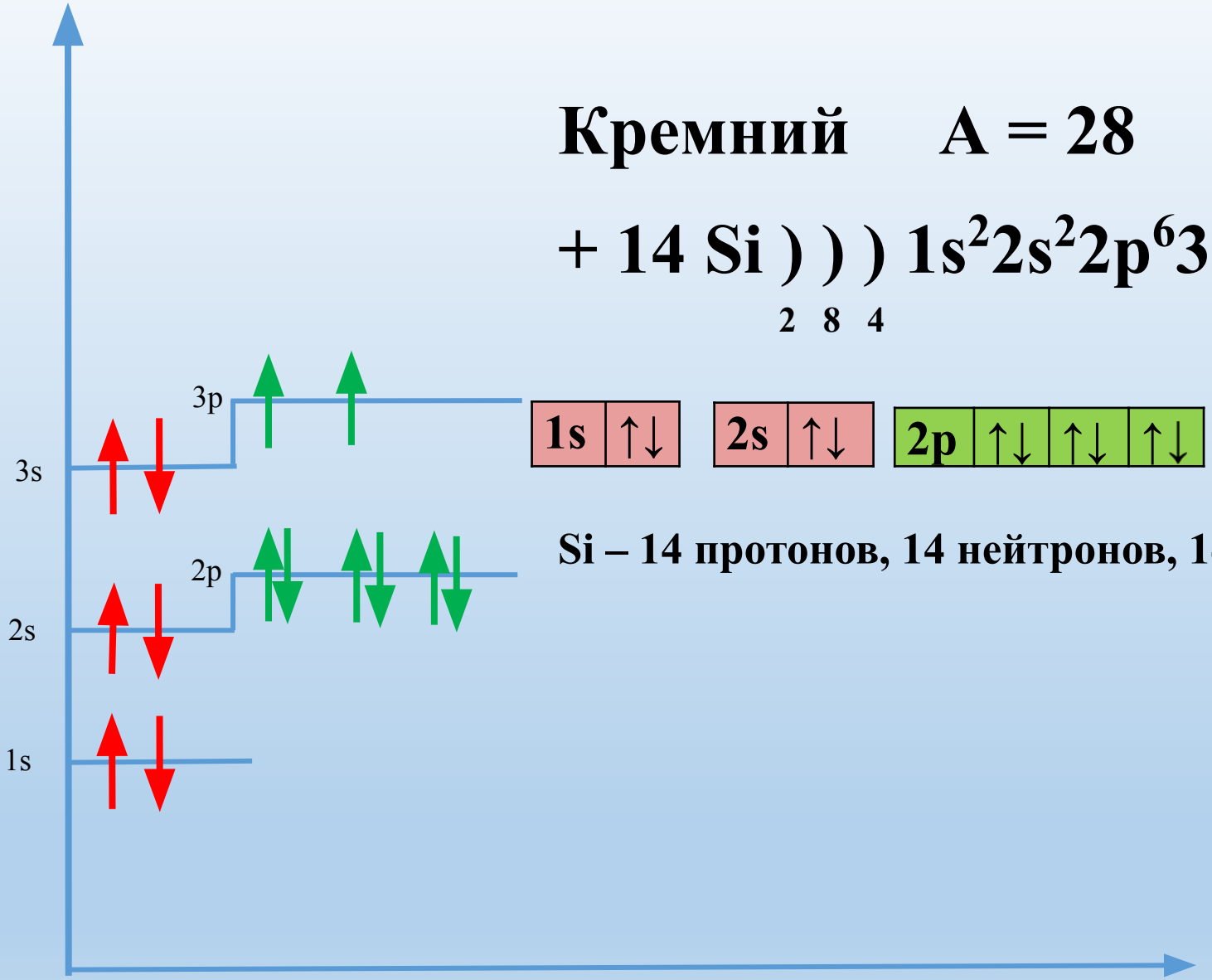


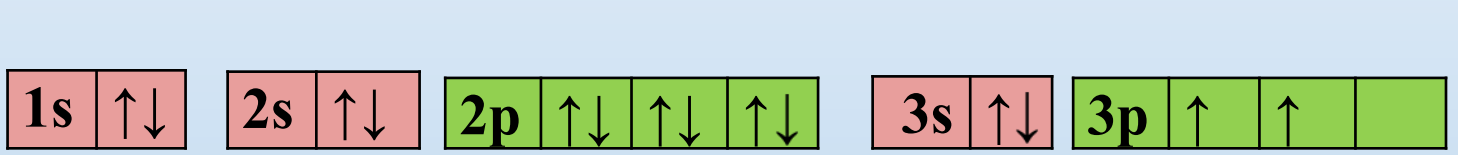
Al – 13 протонов, 14 нейтронов, 13 электронов

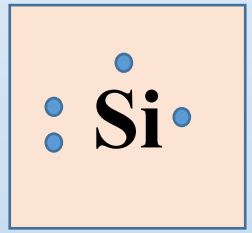
Кремний A = 28

+ 14 Si))) $1s^2 2s^2 2p^6 3s^2 3p^2$

2 8 4





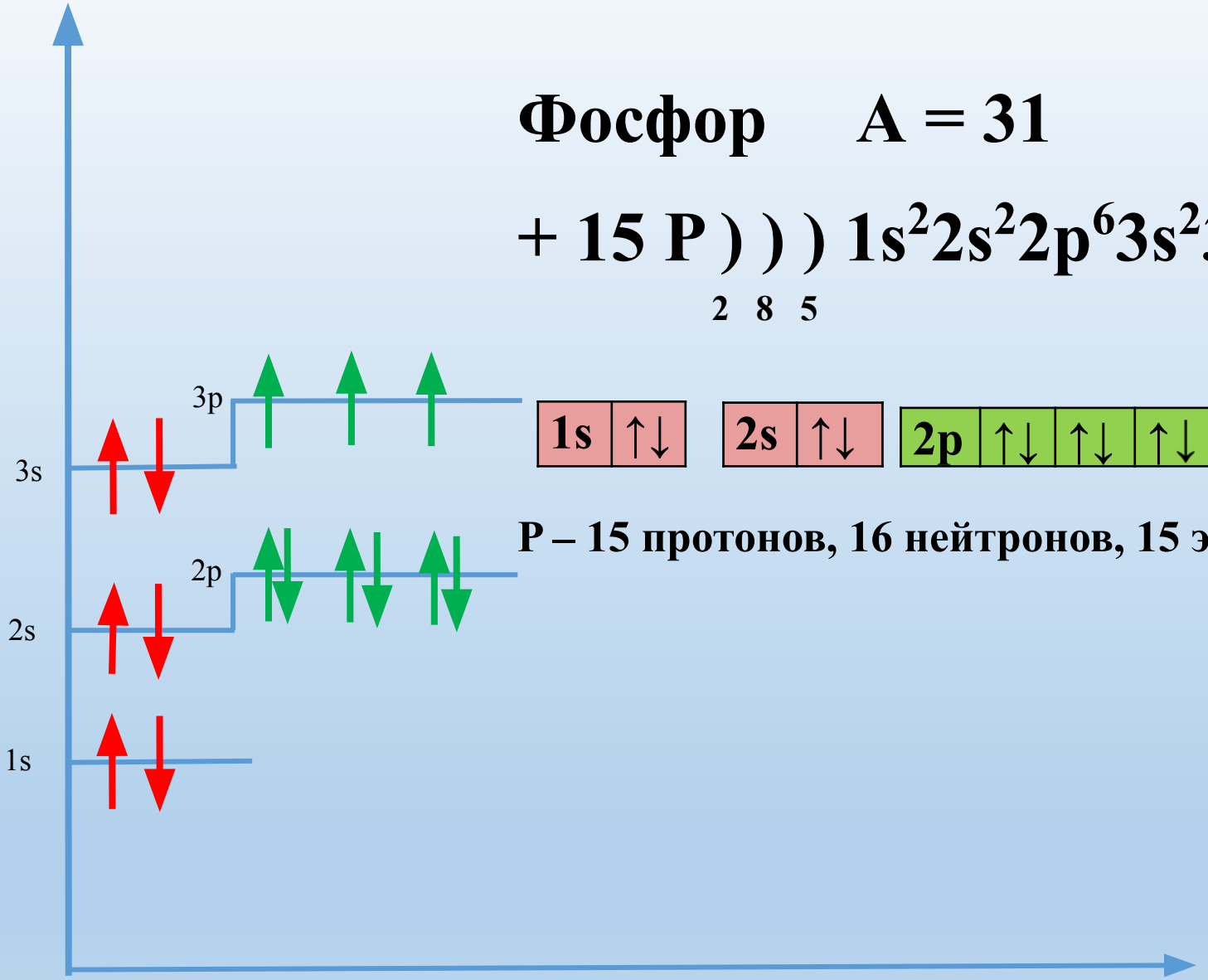


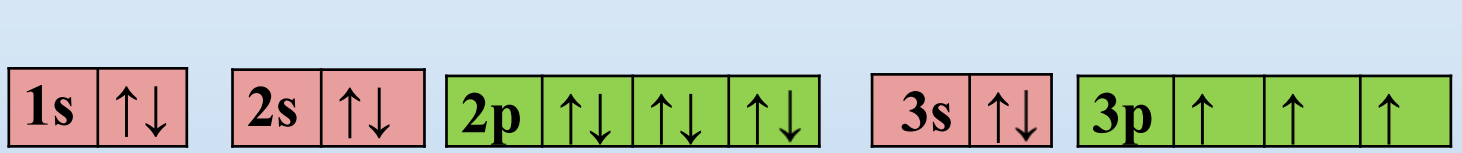
Si – 14 протонов, 14 нейтронов, 14 электронов

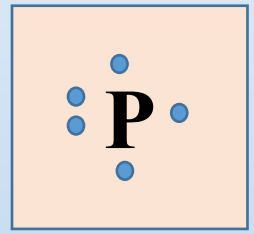
Фосфор A = 31

+ 15 P))) $1s^2 2s^2 2p^6 3s^2 3p^3$

2 8 5





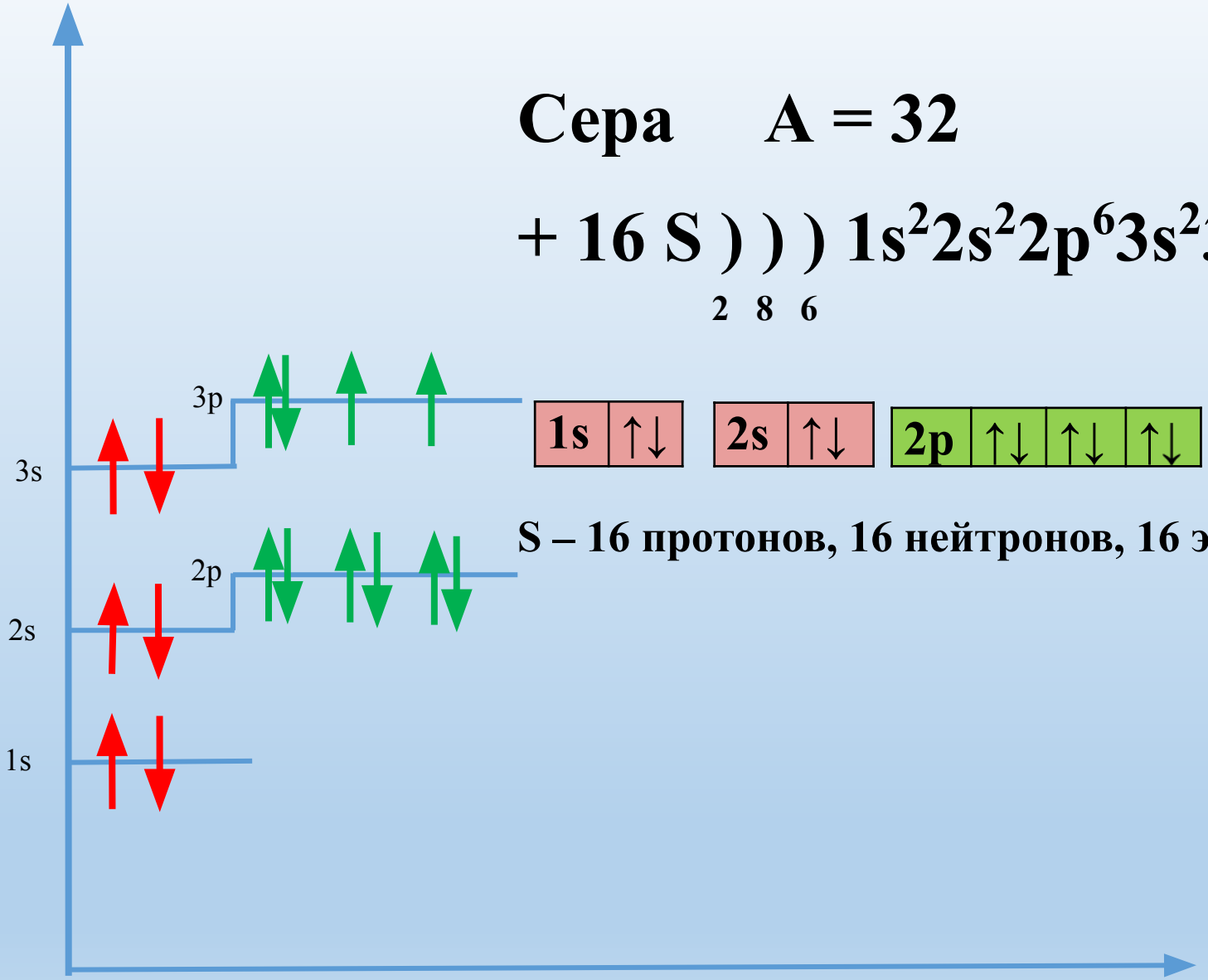


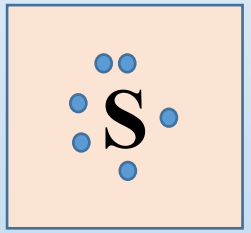
P – 15 протонов, 16 нейтронов, 15 электронов

Сера A = 32

+ 16 S))) $1s^2 2s^2 2p^6 3s^2 3p^4$

2 8 6



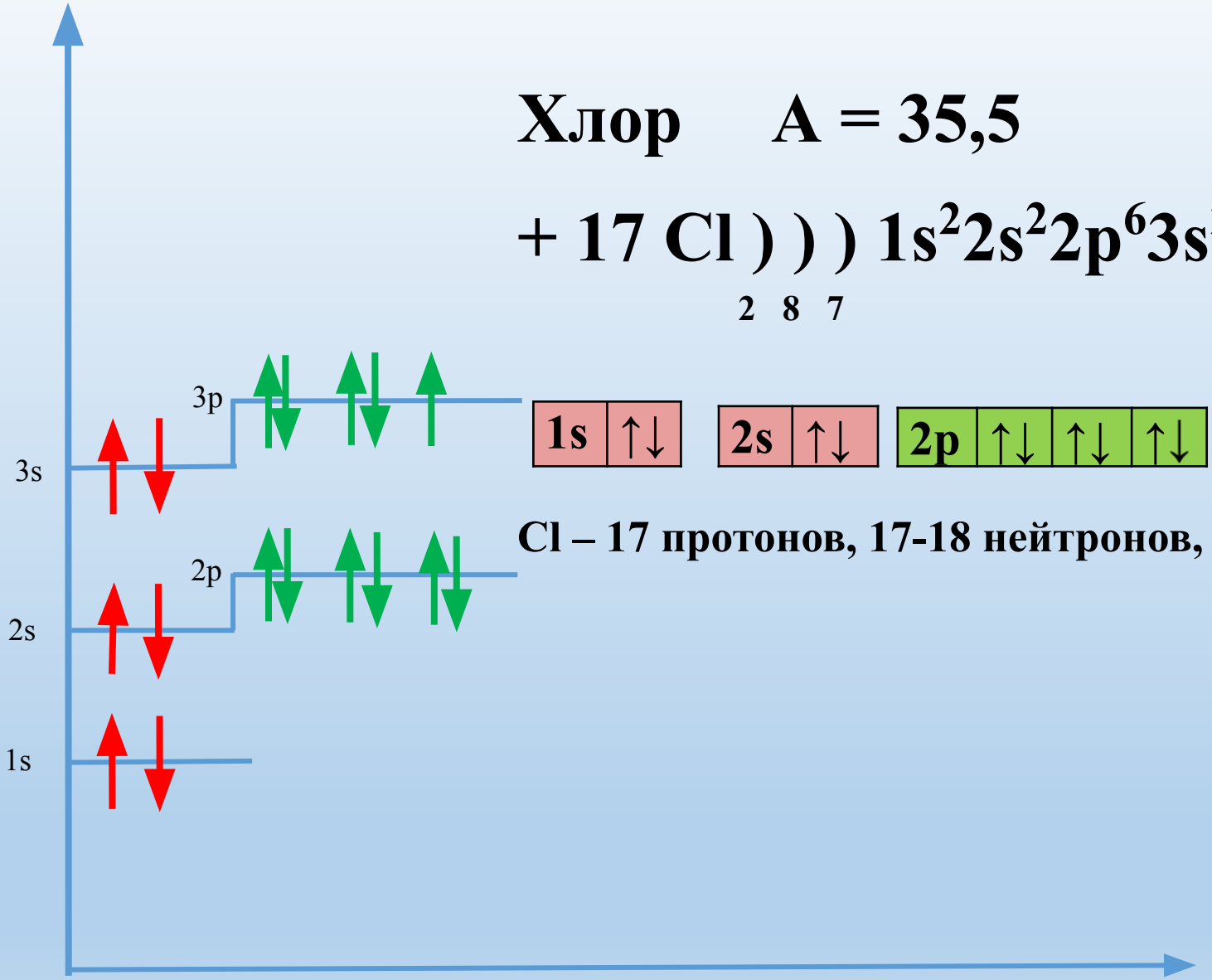


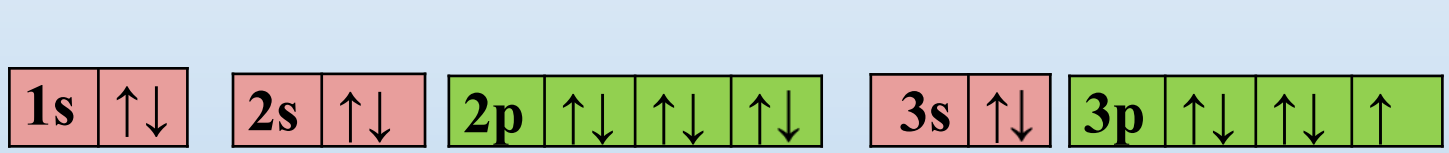
S – 16 протонов, 16 нейтронов, 16 электронов

Хлор A = 35,5

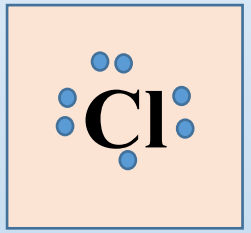
+ 17 Cl))) $1s^2 2s^2 2p^6 3s^2 3p^5$

2 8 7





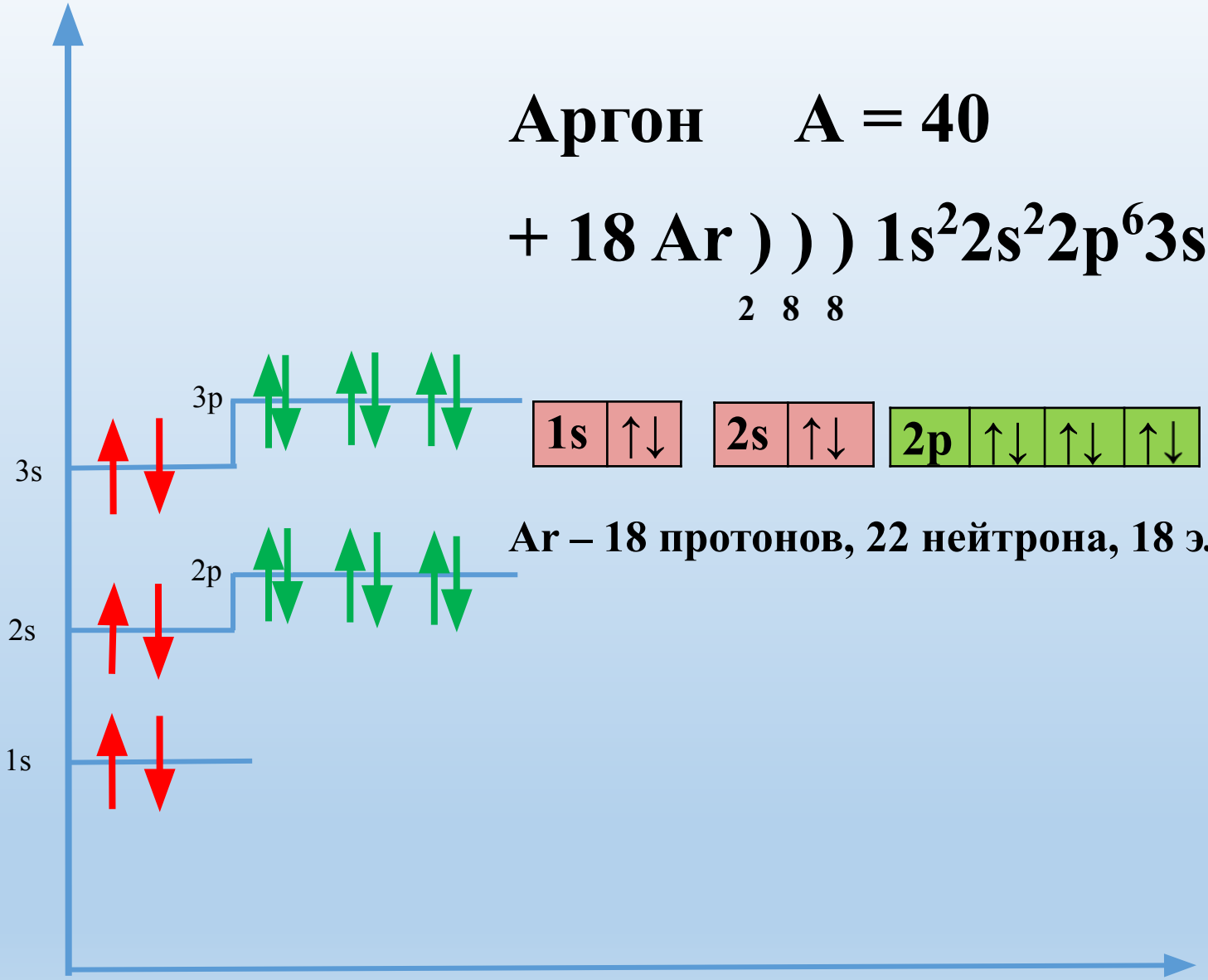
Cl – 17 протонов, 17-18 нейтронов, 17 электронов

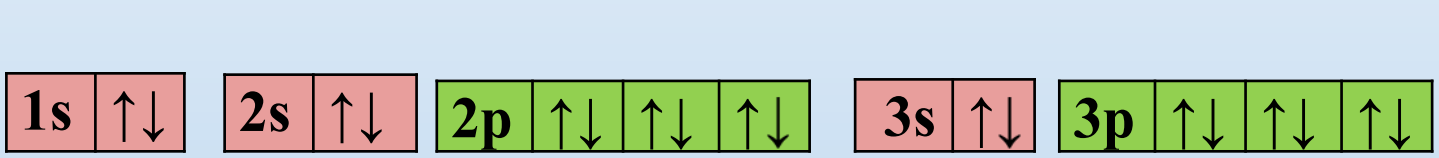


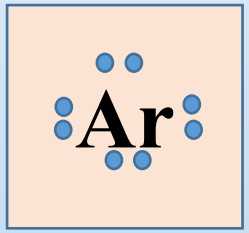
Аргон A = 40

+ 18 Ar))) $1s^2 2s^2 2p^6 3s^2 3p^6$

2 8 8







Ar – 18 протонов, 22 нейтрона, 18 электронов