

The diagram shows a central nucleus labeled 'P + N'. It is surrounded by four concentric electron shells. The electron counts for each shell are: 2 for the first shell, 8 for the second, 10 for the third, and 2 for the fourth. Red lines connect the 10 electrons in the third shell to the 6 electrons in the fourth shell, indicating a transfer.

A. Neon


○))

1 2
8 Ne 3
7 4
6 5

1 ● 2 ●
3 ● 4 ●
5 ● 6 ●
7 ● 8 ●

- Check the dot diagram

Protons	Neutrons	Electrons
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100



A circle followed by three right parentheses symbols: $\circ)))$

1 2
8 7 **Ar**
6 5

1 ● 2 ●
3 ● 4 ●
5 ● 6 ●
7 ● 8 ●

- Check the dot diagram

Protons	Neutrons	Electrons
1	1	1
11	11	11
11	12	11
11	12	10
11	12	9
11	12	8
11	12	7
11	12	6
11	12	5
11	12	4
11	12	3
11	12	2
11	12	1
11	12	0



○))))

$$\begin{array}{ccccc} & & 1 & 2 & \\ & & & & \\ 8 & & & & \\ 7 & & & & \\ & & & & \\ & & 6 & 5 & \end{array} \text{Kr}$$

1	●	2	●
3	●	4	●
5	●	6	●
7	●	8	●

- Check the dot diagram

1. What do all these models have in common? _____
2. What is their common location on the periodic table? _____
3. Look at the periodic table.
What period is Cesium in? _____
How many energy levels would the model of Cesium have? _____
What family is Cesium in? _____
How many valence electrons does Cesium have? _____