

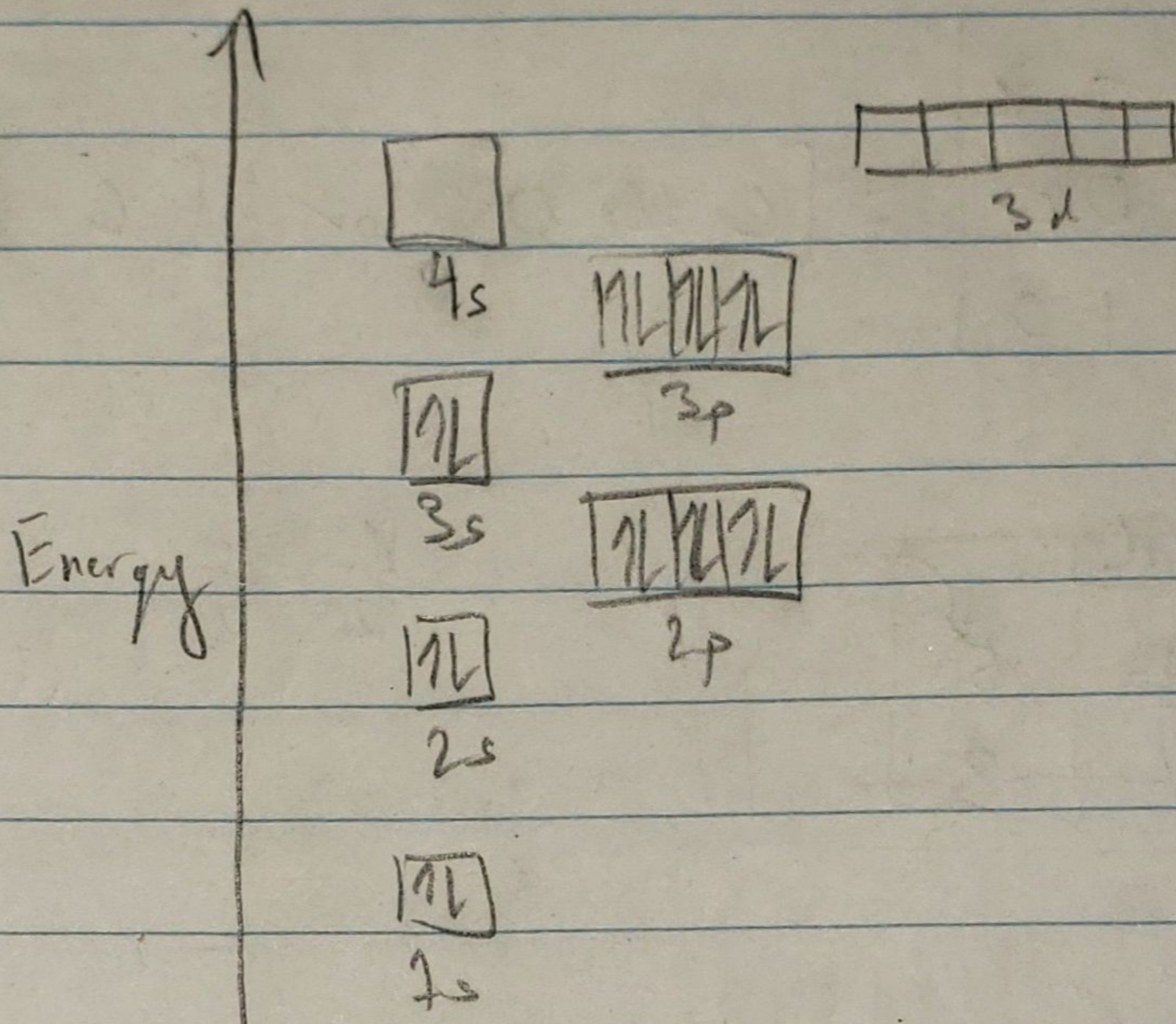
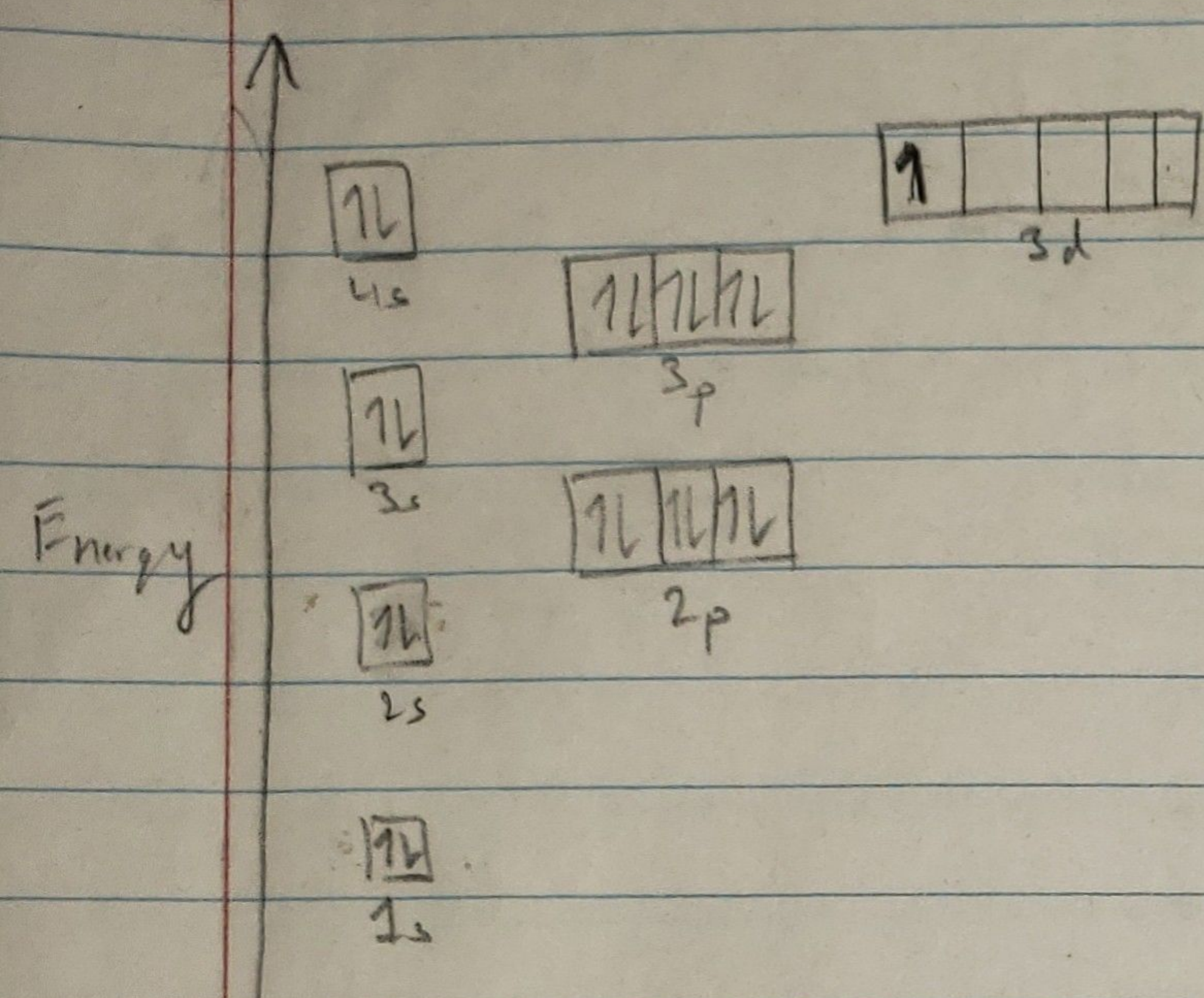
Structures + Properties of Matter

1. a)

e^-	n	l	m_l	m_s
1	3	2	-2	$+\frac{1}{2}$
2	4	0	0	$-\frac{1}{2}$

b)

c)

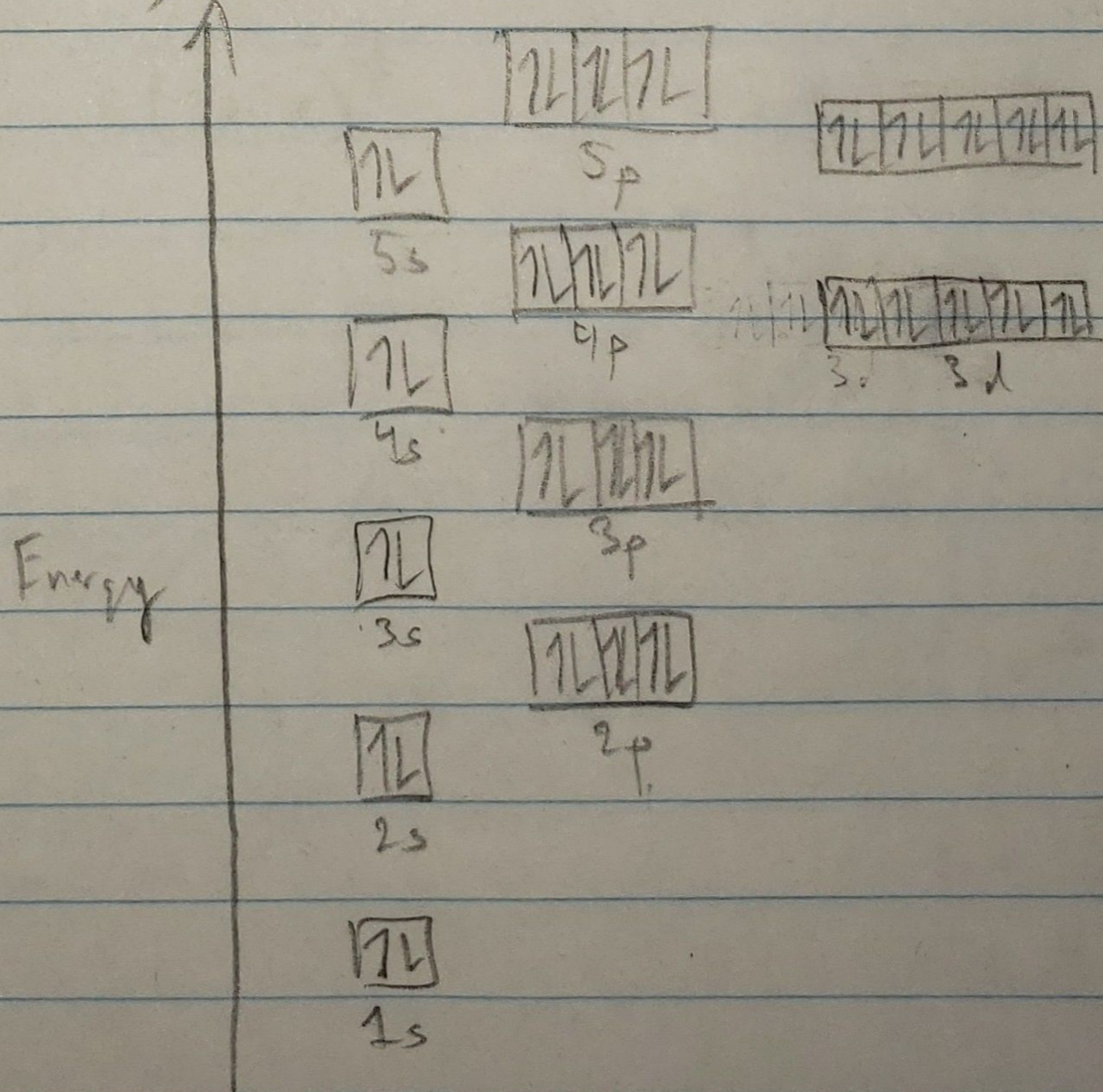
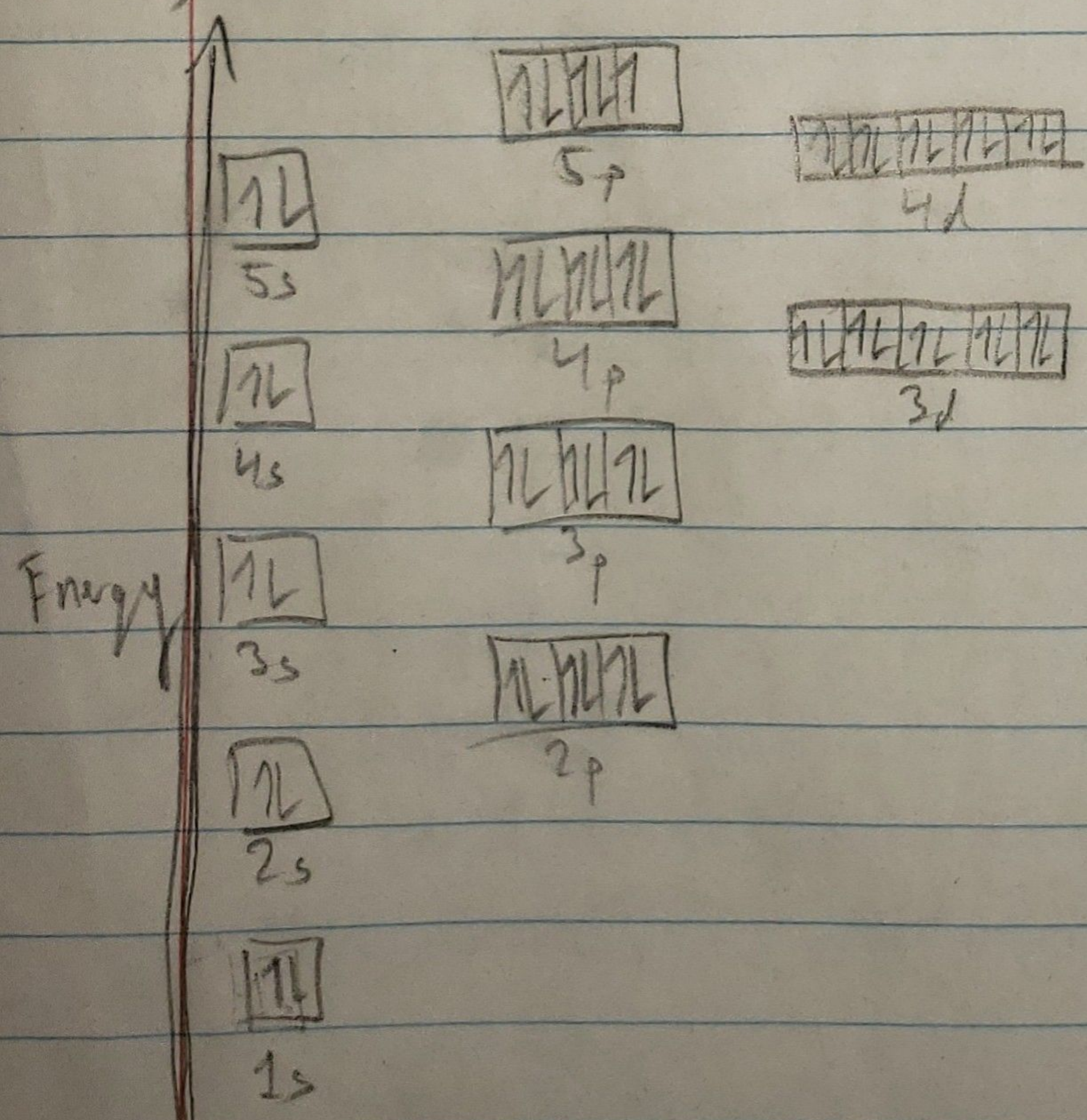


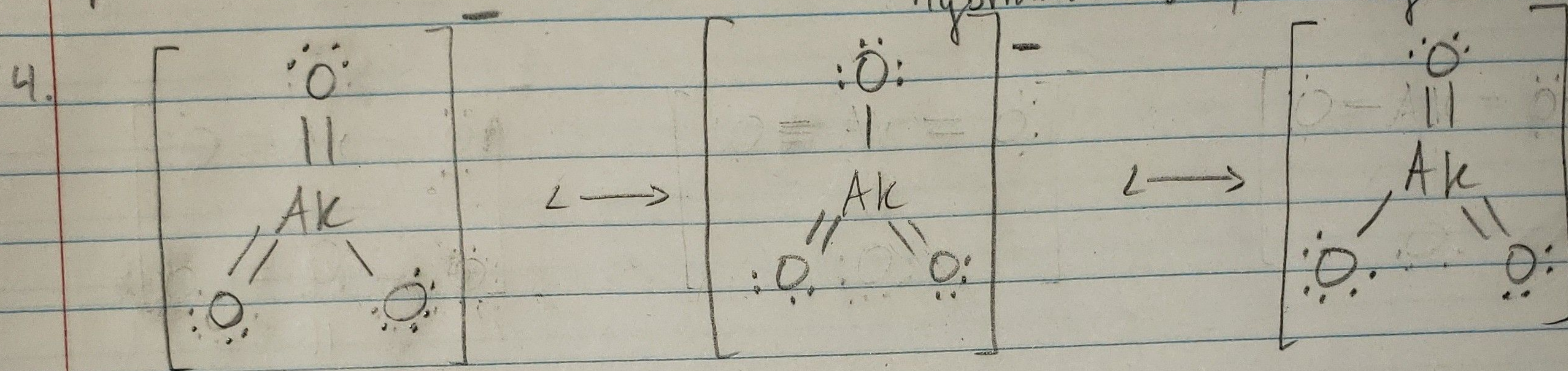
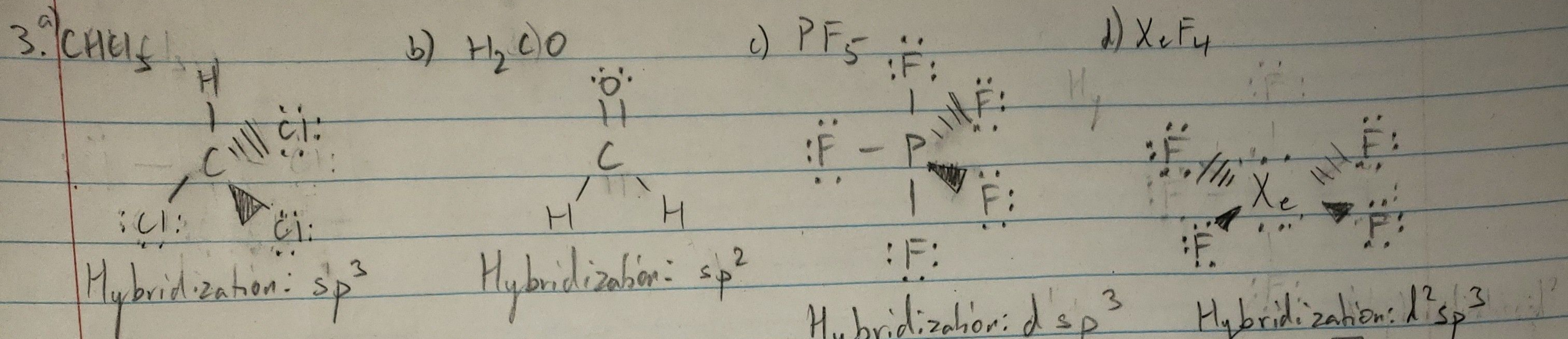
2. a)

e^-	n	l	m_l	m_s
1	5	1	0	$-\frac{1}{2}$
2	5	1	-1	$-\frac{1}{2}$
3	5	1	1	$+\frac{1}{2}$

b)

c)





$$FC_{\text{C}} = 5 - 5 - 0 = 0$$

$$FC_{\text{O}} = 6 - 4 - 2 = 0 \quad (\text{Double-bonded oxygen})$$

$$FC_{\text{O}} = 6 - 6 - 1 = -1 \quad (\text{Single-bonded oxygen})$$

All structures have the same formal charge. Any of the three can be the correct structure.