

Quantum Numbers

- ①
- a) Wrong $\rightarrow l = -1 \dots l$ cannot be negative
 - b) Correct $\rightarrow 2p$ orbital
 - c) Wrong $\rightarrow l = n \dots l$ cannot be greater than $n-1$.
 - d) Wrong $\rightarrow m_l > l \dots m_l$ cannot be greater than l .
- ②
- a) Wrong $\rightarrow m_l > l \dots m_l$ cannot be greater than l .
 - b) Correct $\rightarrow 2s$ orbital
 - c) Wrong $\rightarrow l = n \dots l$ cannot be greater than $n-1$
 - d) Correct $\rightarrow 3p$ orbital
- ③
- a) Wrong \rightarrow When $l=0$, m_l has to be 0.
 - b) Correct $\rightarrow 4f$ orbital
 - c) Correct $\rightarrow 3p$ orbital
 - d) Wrong $\rightarrow m_l$ cannot be greater than l