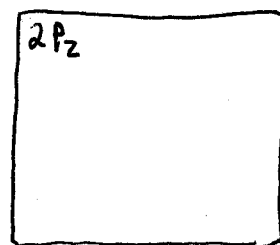
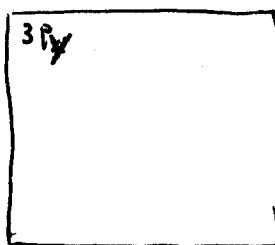
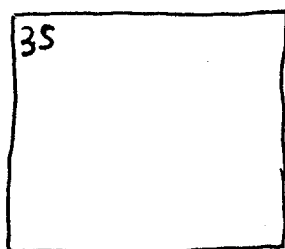


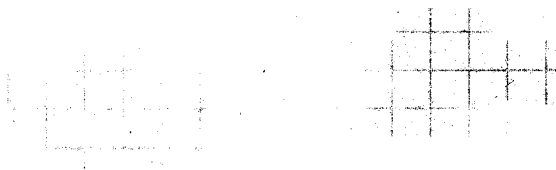
① Fill in the following table

<u>H wavefunction</u>	<u># of radial nodes</u>	<u># of angular nodes</u>
3s	_____	_____
3d	_____	_____
5d	_____	_____
2p	_____	_____

② sketch a density plot of the following ^{mod square of the} ψ wavefunctions



③ Order electronic transitions, rotational transitions and vibrational transitions according to increasing energy.



④ Which molecule is photostable (i.e. won't fall apart under light)

