A solution of $[\text{Ni(H}_2\text{O})_6]^{2+}(\text{aq})$ is cyan. This means this complex absorbs ...

A red light  
B cyan light  
C yellow light  
D blue light

A solution of $[\text{Ni(NH}_3)_6]^{2+}(\text{aq})$ is blue. This means this complex absorbs ...

A red light  
B cyan light  
C yellow light  
D blue light

A solution of $[\text{Ni(H}_2\text{O})_6]^{2+}(\text{aq})$ is cyan because it absorbs red light, and a solution of $[\text{Ni(NH}_3)_6]^{2+}(\text{aq})$ is blue because it absorbs yellow light. For which complex does light cause the electron density to oscillate faster?

A $[\text{Ni(H}_2\text{O})_6]^{2+}(\text{aq})$  
B $[\text{Ni(NH}_3)_6]^{2+}(\text{aq})$  
C More information needed

A solution of $[\text{Ni(H}_2\text{O})_6]^{2+}(\text{aq})$ is cyan because it absorbs red light, and a solution of $[\text{Ni(NH}_3)_6]^{2+}(\text{aq})$ is blue because it absorbs yellow light. For which complex does light absorption increase electron energy less?

A $[\text{Ni(H}_2\text{O})_6]^{2+}(\text{aq})$  
B $[\text{Ni(NH}_3)_6]^{2+}(\text{aq})$  
C More information needed

Light causes the electron density to oscillate faster in $[\text{Ni(NH}_3)_6]^{2+}(\text{aq})$ than in $[\text{Ni(H}_2\text{O})_6]^{2+}(\text{aq})$. This is because...

A H$_2$O is a stronger LB, and so its bond with Ni II is stronger  
B $[\text{Ni(NH}_3)_6]^{2+}(\text{aq})$ electrons are held more loosely.  
C $[\text{Ni(H}_2\text{O})_6]^{2+}(\text{aq})$ electrons are held more tightly.  
D None of the above.