

1. The melting point of molecular hydrogen ( $\text{H}_2$ ) is  $\sim 14\text{K}$  ( $-259^\circ\text{C}$ ). Draw a molecular level picture of what molecular hydrogen looks like below this temperature (i.e., as a solid). Why are the molecules of hydrogen sticking together?
2. The boiling point of molecular hydrogen ( $\text{H}_2$ ) is  $\sim 20\text{K}$  ( $-253^\circ\text{C}$ ). Draw a molecular level picture of what molecular hydrogen looks like above this temperature (ie as a gas)
3. At high temperatures eg  $> 6000\text{K}$  molecular hydrogen dissociates. Draw a picture of what you imagine this might look like. Why do you think it takes such a high temperature to bring about this change?