

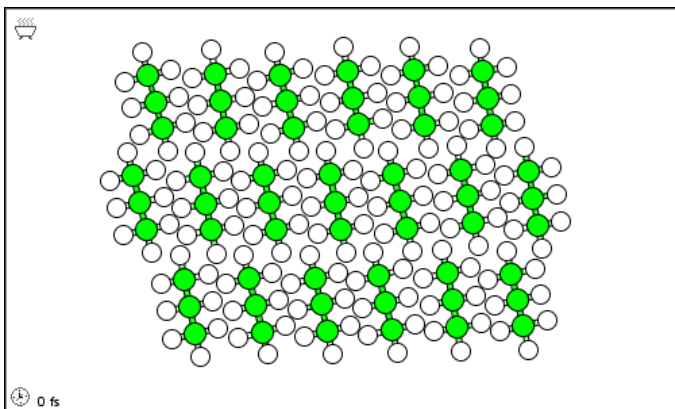
## Test for Molecular Crystals Activity

Name \_\_\_\_\_ Date \_\_\_\_\_  
Teacher \_\_\_\_\_ Class \_\_\_\_\_

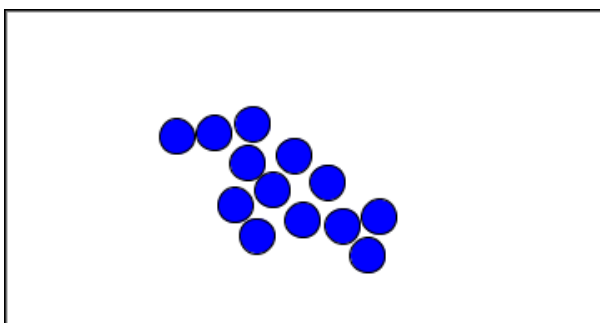
1. Which of the following molecules shows a molecular crystalline solid?

Note: each ball in these models represents a single atom.

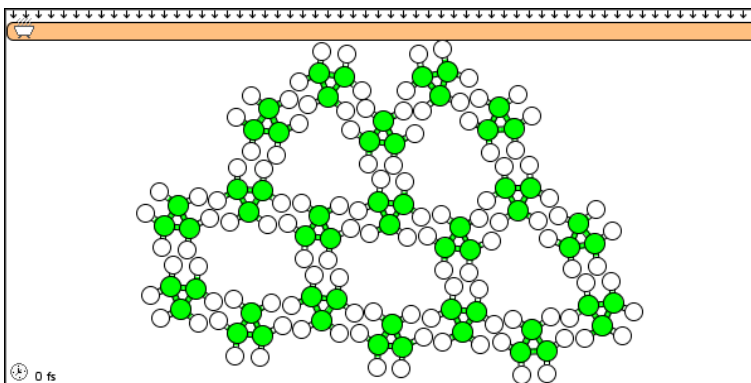
a) Is this image a molecular crystal? (Yes, No)



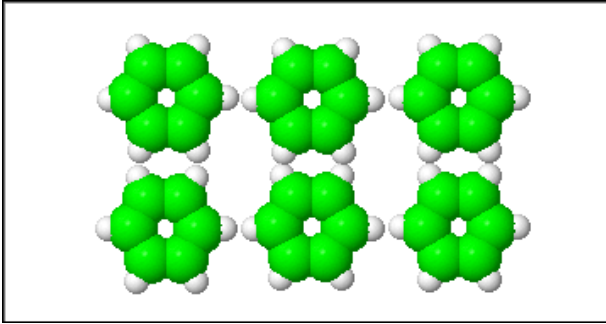
b) Is this image a molecular crystal? (Yes, No)



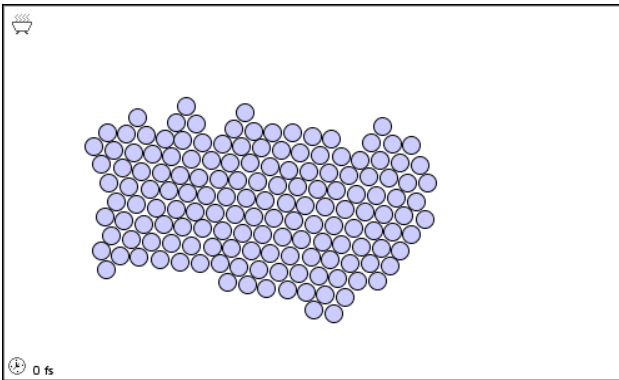
c) Is this image a molecular crystal? (Yes, No)



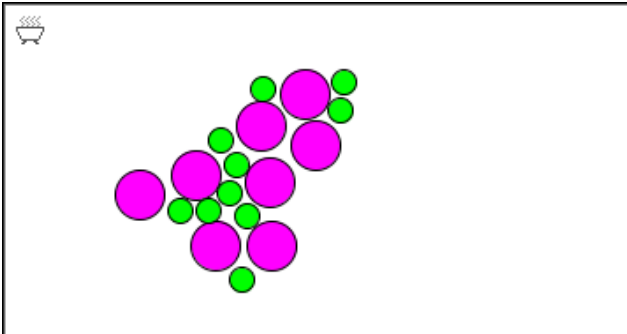
d) Is this image a molecular crystal? (Yes, No)



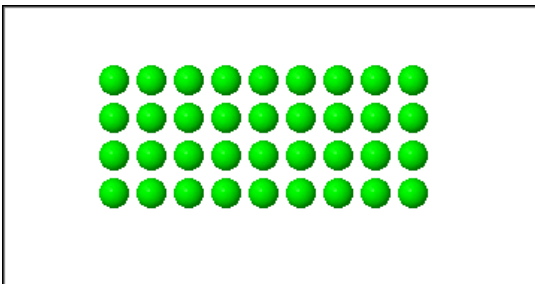
e) Is this image a molecular crystal? (Yes, No)



f) Is this image a molecular crystal? (Yes, No)



g) Is this image a molecular crystal? (Yes, No)



2. Pick two molecular crystals from the images above. Record the letters and answer the following questions:

a. Which of the crystals would compress more easily? Explain your reason.

b. Which of the crystals would melt (lose its crystalline structure) first? Explain your reason.

3. Polymorphism is an important development in pharmaceuticals. Many drugs are receiving approval for only a single crystal form or polymorph. Imagine that in a patent case a company was claiming it used a polymorph II type of ingredient instead of a polymorph I. Describe how a tool could work that would help the judge resolve this case.