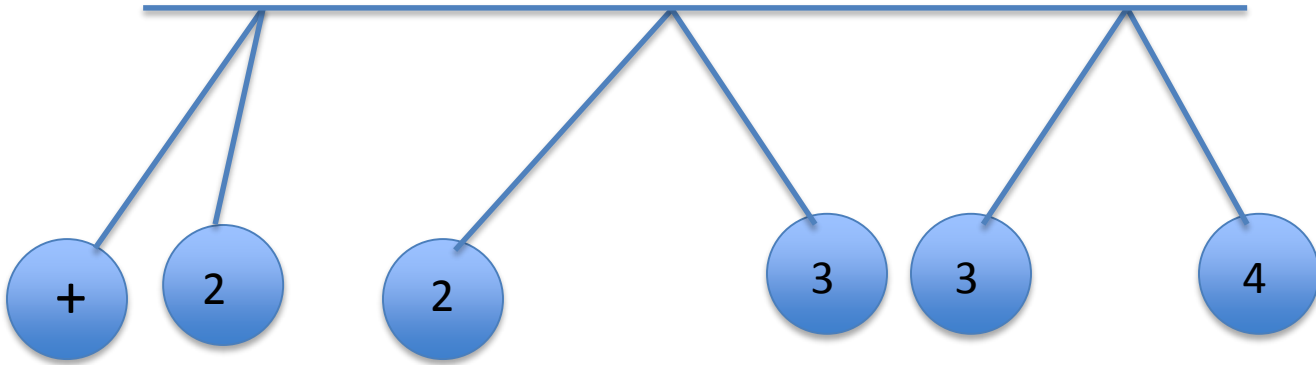


## ALL CHARGED UP PRACTICE

Name \_\_\_\_\_

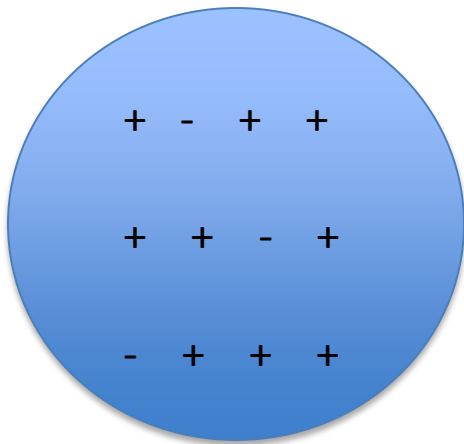
Date \_\_\_\_\_ Hour/Period \_\_\_\_\_



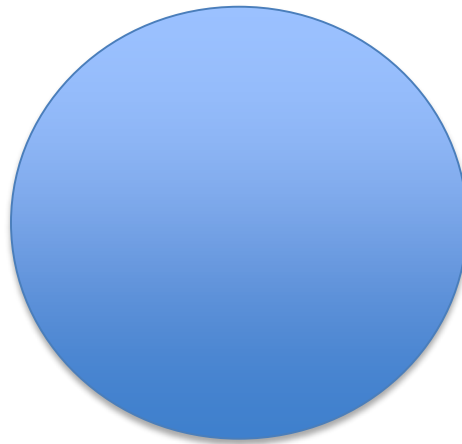
1. Object two is attracted to the object on the left. Object 3 is repelled by both objects 2 and 4. What is the sign of object 4? Explain how you know by stating specific laws or concepts required to arrive at your answer.
  
  
  
  
  
  
  
  
  
  
2. Two charged objects have the same sign and same amount of charge. They exert a force,  $F$ , on one another.
  - a. If one object has double the charge, how is the force affected?
  
  
  
  
  
  
  
  - b. How is the force affected if the distance is doubled but the objects have equal amounts of charge and opposite signs?

## ALL CHARGED UP PRACTICE

- c. How is the force affected if both charges are positive and the distance is halved, but one object has 4 times the charge as the other object?
3. Two neutral objects of the same materials have been vigorously rubbed together and the pictures below show the charge distribution for object 1. Draw the charge distribution for object 2. Justify your answer by stating laws or concepts required to arrive at your answer.



Object 1



Object 2

4. Why does your hair stand up when rubbed vigorously with a balloon? Draw a picture supporting your response.