Conclusion Questions:

**Please answer the following questions on the notebook paper in your binder.**

1. Define half-life.
2. Can you predict when a particular “Candium” atom will decay?
3. Is your graph of the class data a straight line?
4. What does the shape of the line tell you about how a radioisotope decays?
5. Would the *shape* of your graph change if you started with more pieces of candy? Why or why not?
6. Would the *data points* change if you started with more pieces of candy? Why or why not?
7. In the experiment what was the length of the half-life of the element Candium?
8. Would the length of the half-life change if you started with more or less pieces of candy? Why or why not?
9. At the end of 2 half-lives what fraction of the atoms had *not* decayed?
10. If you allowed 3 minutes between each trial instead of 10 seconds, how long would the half-life be?
11. The half-life of sulfur-38 is 2.87 hours. After 8.61 hours, what *percent* of the original radiation is left?
12. Iron-59 is used in medicine to diagnose blood circulation disorders. The half-life of iron-59 is
44.5 days. How much of a 2.000 mg sample will remain after 133.5 days?
13. Germanium-66 has a half-life of 2.5 hours. You have 35 grams of the radioactive material.
After 16 days how much radioactive material remains?

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