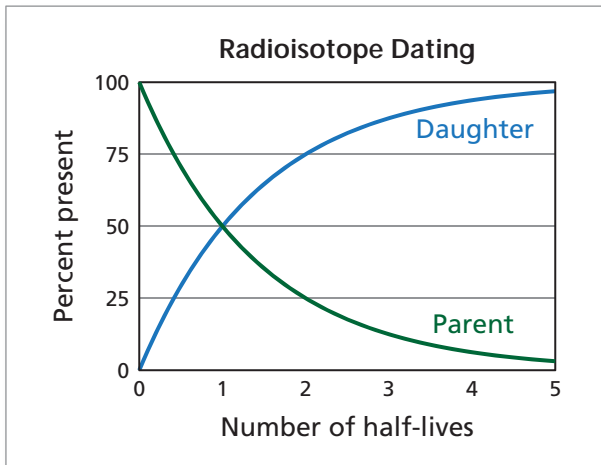


## ▶ Extending Concepts

**Social Media** In Exercises 19–23, use the information below.

A video posted on a social media website has 1024 views on day 1. The number of views increases by 50% each day through day 10, and then decreases by 10% each day through day 30.

19. Write a formula that represents the number of daily views for the first 10 days.
20. How many views does the video have on day 10?
21. Write a formula that represents the number of daily views for day 10 through day 30.
22. Sketch a graph showing the number of daily views for the 30 days.
23. Does the video have more views on day 1 or day 30?



24. **Radioisotope Dating** There are several other methods that use radioactive decay to date objects. When a radioactive substance decays into another substance, the original substance is called the “parent” and the new substance is called the “daughter.”
  - a. When is the number of parents the same as the number of daughters?
  - b. After two half-lives, what is the ratio of the number of parents to the number of daughters?
  - c. Does the graph of the parents exhibit exponential decay? Does the graph of the daughters exhibit exponential growth? Explain.

- d. Several methods of dating objects are shown in the diagram. Why do you think uranium-lead dating can be used to date older objects that carbon-14 dating cannot date?

