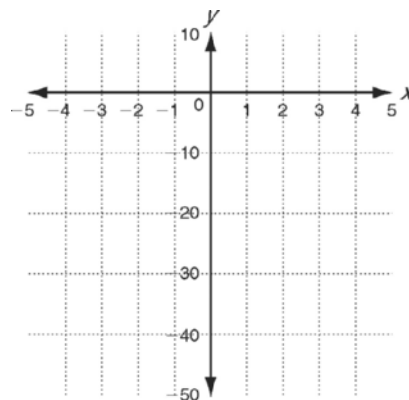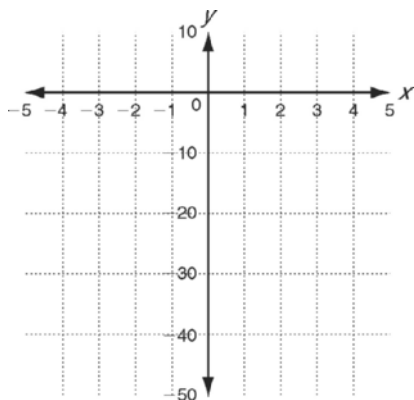Name _____ Date _____ Class _____

Practice B

Exponential Functions, Growth, and Decay

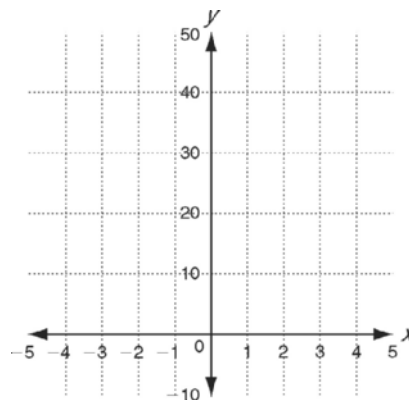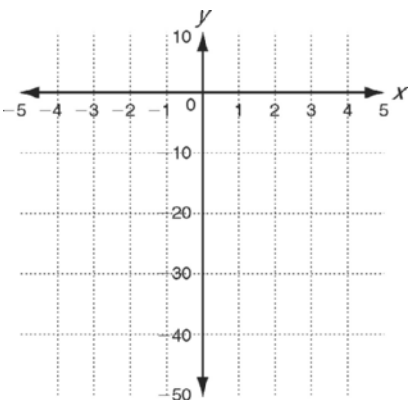**Tell whether the function shows growth or decay. Then graph.**

1. $g(x) = -(2)^x$

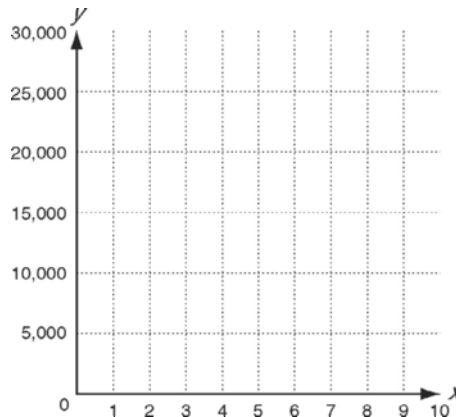2. $h(x) = -0.5(0.2)^x$

3. $j(x) = -2(0.5)^x$

4. $p(x) = 4(1.4)^x$

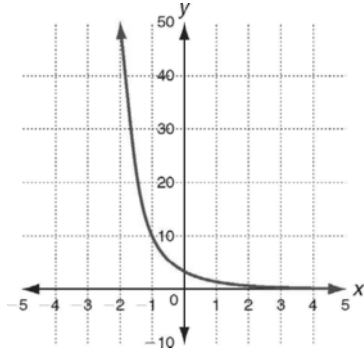**Solve.**

5. A certain car depreciates about 15% each year.

   a. Write a function to model the depreciation in value for a car valued at $20,000.

   _____

   b. Graph the function.
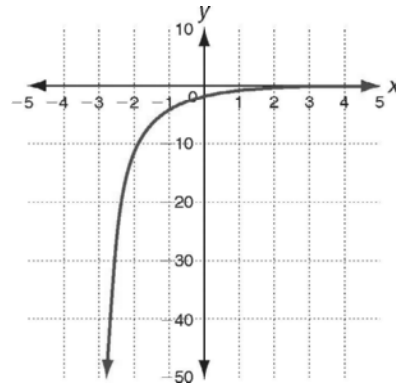
   c. Suppose the car was worth $20,000 in 2005. What is the first year that the value of this car will be worth less than half of that value?
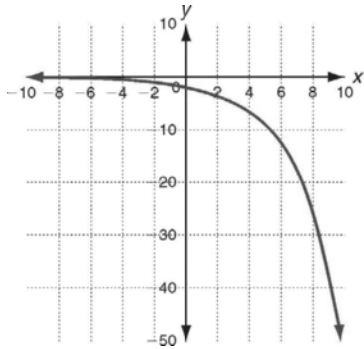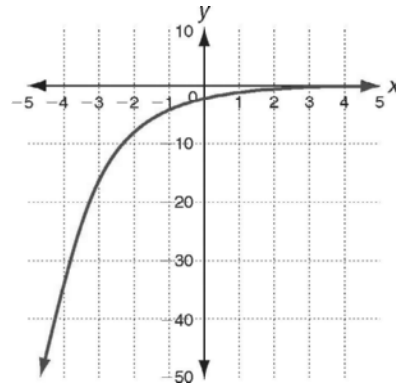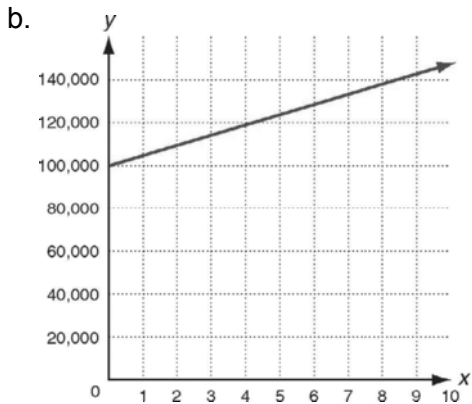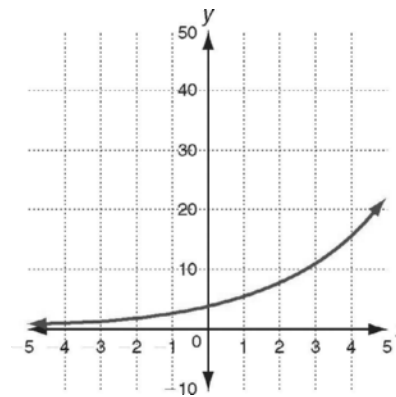
   _____

4. Decay

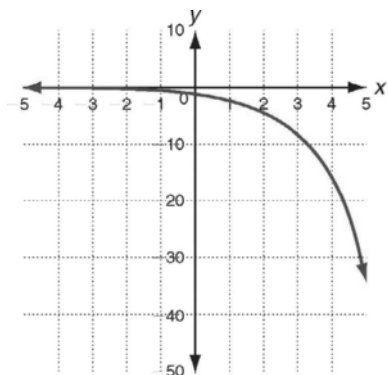2. Decay

5. Growth

3. Decay

6. a. $y = 100,000(1.04)^x$
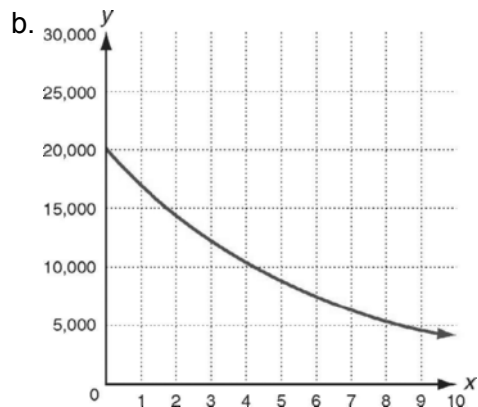
b.

c. 2012

4. Growth

Practice B

1. Growth

5. a. $y = 20,000(0.85)^x$

b.

c. 2010