

LESSON
7-1

Practice A

Exponential Functions, Growth, and Decay

Complete each statement to tell whether each is a growth or decay function.

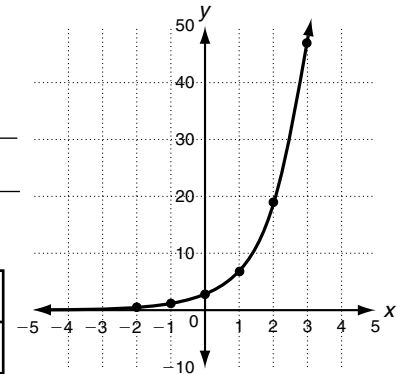
1. A function of the form $f(x) = ab^x$ is called an exponential _____ function when b is greater than 1.
2. A function of the form $f(x) = ab^x$ is called an exponential _____ function when b is a number between 0 and 1.

Tell whether the function shows growth or decay. Then graph. The first one is done for you.

3. $f(x) = 3(2.5)^x$

- a. Find the value of the base. 2.5
- b. Does the function show growth or decay? Growth
- c. Make a table of values for the function.

x	-2	-1	0	1	2	3
f(x)	0.48	1.2	3	7.5	18.75	46.875

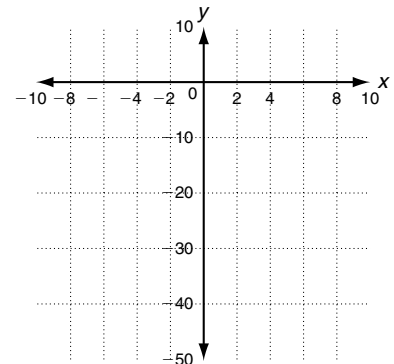
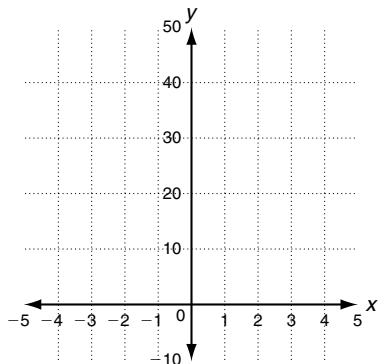


- d. Graph the function.

Follow steps a-d for Exercises 4 and 5.

4. $g(x) = 2(0.2)^x$

5. $j(x) = -(1.5)^x$



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Exponential Functions, Growth, and Decay

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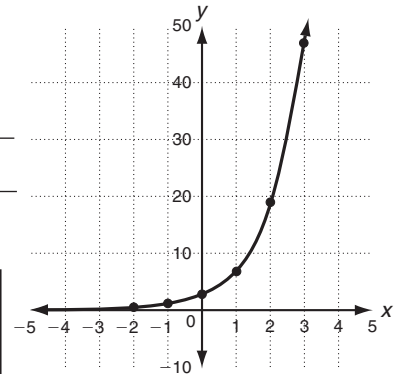
1. A function of the form $f(x) = ab^x$ is called an exponential Growth function when b is greater than 1.
2. A function of the form $f(x) = ab^x$ is called an exponential Decay function when b is a number between 0 and 1.

Tell whether the function shows growth or decay. Then graph. The first one is done for you.

3. $f(x) = 3(2.5)^x$

- a. Find the value of the base. 2.5
- b. Does the function show growth or decay? Growth
- c. Make a table of values for the function.

x	-2	-1	0	1	2	3
f(x)	0.48	1.2	3	7.5	18.75	46.875



- d. Graph the function.

Follow steps a-d for Exercises 4 and 5.

4. $g(x) = 2(0.2)^x$

Decay

5. $j(x) = -(1.5)^x$

Growth

