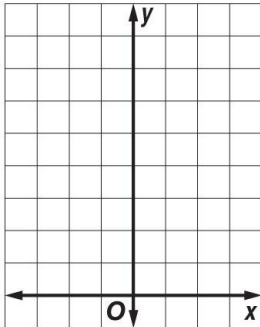


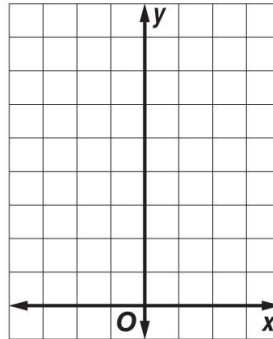
# Alg 1 Practice: 7-5 Exponential Functions

Graph each function. Find the y-intercept, and state the domain and range.

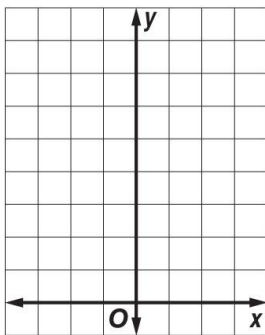
1.  $y = 2^x$



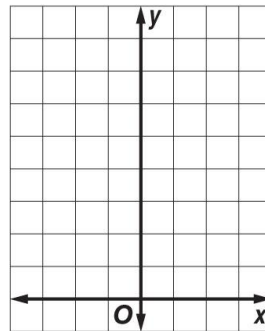
2.  $y = \left(\frac{1}{3}\right)^x$



3.  $y = 3(2^x)$



4.  $y = 3^x + 2$



Determine whether the set of data shown below displays exponential behavior. Write *yes* or *no*. Explain why or why not.

5.

<b>x</b>	-3	-2	-1	0
<b>y</b>	9	12	15	18

6.

<b>x</b>	0	5	10	15
<b>y</b>	20	10	5	2.5

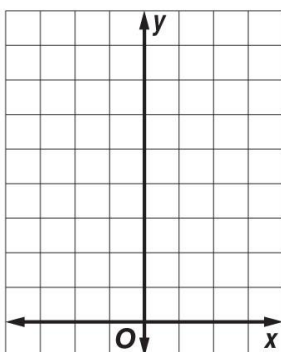
7.

<b>x</b>	4	8	12	16
<b>y</b>	20	40	80	160

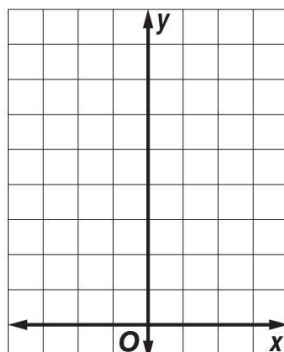
8.

<b>x</b>	50	30	10	-10
<b>y</b>	90	70	50	30

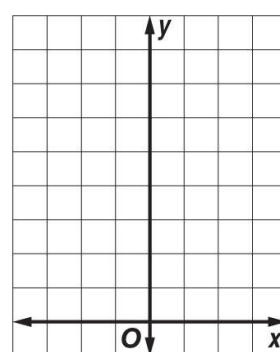
$$y = \left(\frac{1}{10}\right)^x$$



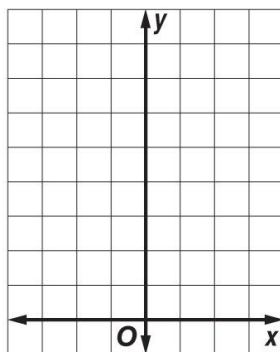
$$y = 3^x$$



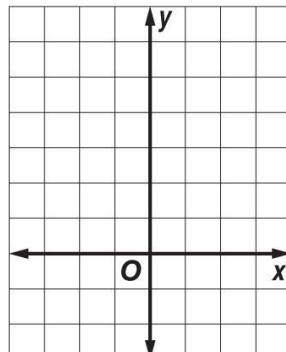
$$y = \left(\frac{1}{4}\right)^x$$



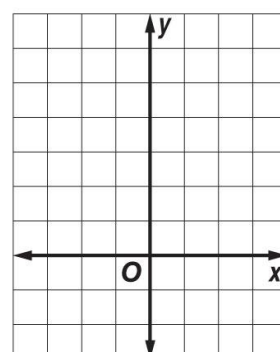
$$y = 4(2^x) + 1$$



$$y = 2(2^x - 1)$$



$$y = 0.5(3^x - 3)$$



**LEARNING** Ms. Klemperer told her English class that each week students tend to forget one-sixth of the vocabulary words they learned the previous week. Suppose a student learns 60 words. The number of words remembered can be described by the function  $W(x) = 60 \left(\frac{5}{6}\right)^x$ , where  $x$  is the number of weeks that pass. How many words will the student remember after 3 weeks?