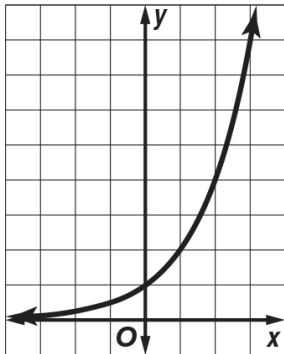


7-5 Exponential Functions

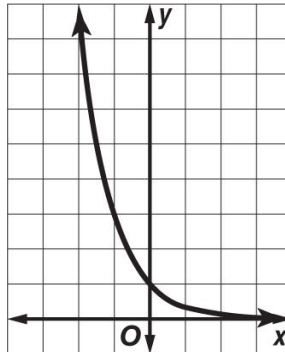
Graph each function. Find the y-intercept, and state the domain and range.

1. $y = 2^x$



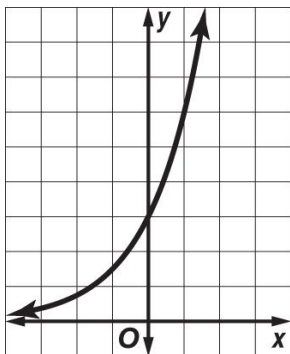
1; $D = \{\text{all real numbers}\}$,
 $R = \{y / y > 0\}$

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



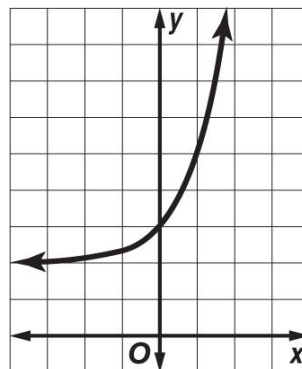
1; $D = \{\text{all real numbers}\}$,
 $R = \{y / y > 0\}$

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



3; $D = \{\text{all real numbers}\}$,
 $R = \{y / y > 0\}$

4. $y = 3^x + 2$



3; $D = \{\text{all real numbers}\}$,
 $R = \{y / y > 2\}$

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

5.

x	-3	-2	-1	0
y	9	12	15	18

No; the domain values are at regular intervals and the range values have a common difference 3.

6.

x	0	5	10	15
y	20	10	5	2.5

Yes; the domain values are at regular intervals and the range values have a common factor 0.5.

7.

x	4	8	12	16
y	20	40	80	160

Yes; the domain values are at regular intervals and the range values have a common factor 2.

8.

x	50	30	10	-10
y	90	70	50	30

No; the domain values are at regular intervals and the range values have a common difference 20.