

Name: _____

Date: _____

Topic: _____

Class: _____

Main Ideas/Questions

Notes/Examples

EXPONENTIAL *Functions*

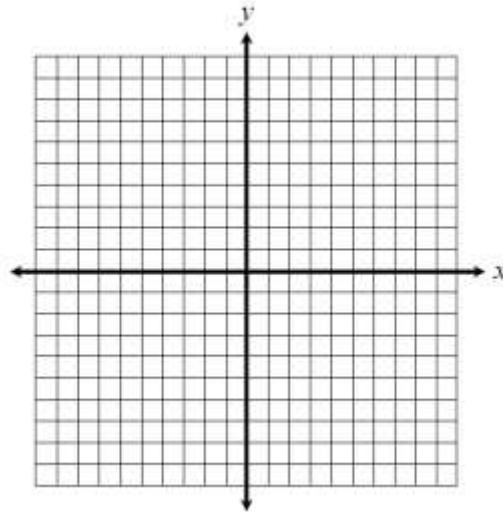


- Exponential functions are defined by an equation of the form _____.
- If $b > 1$, the function is an _____ and is _____.
- If $0 < b < 1$, the function is an _____ and is _____.

ASYMPTOTE

Directions: Classify as an exponential growth or decay, create a table of values and graph, then identify its key characteristics.

1. $y = 2^x$



Growth / Decay

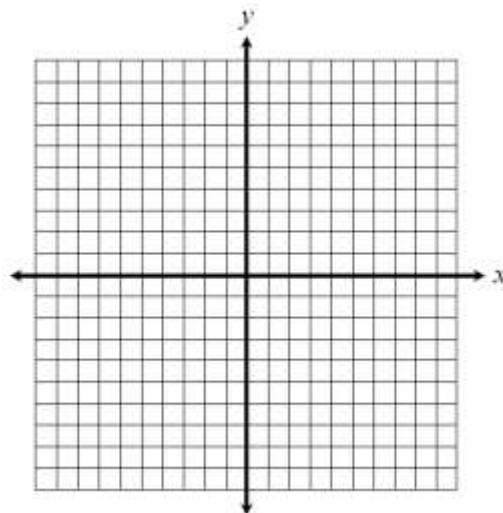
Domain: _____

Range: _____

y-intercept: _____

Asymptote: _____

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



Growth / Decay

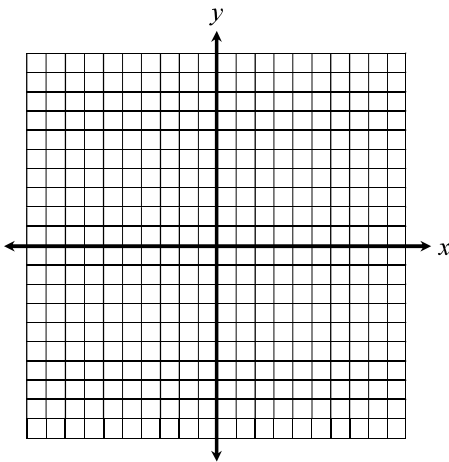
Domain: _____

Range: _____

y-intercept: _____

Asymptote: _____

3. $y = 3^x - 1$



Growth / Decay

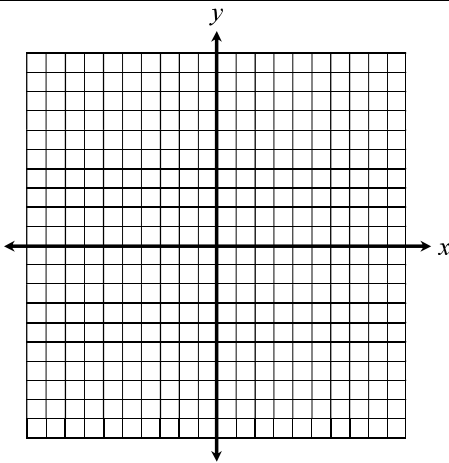
Domain: _____

Range: _____

y-intercept: _____

Asymptote: _____

4. $y = \left(\frac{1}{3}\right)^x + 4$



Growth / Decay

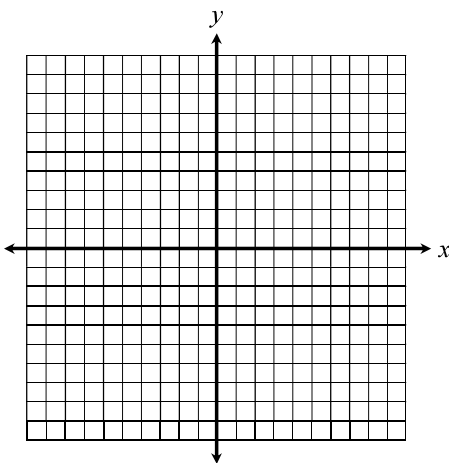
Domain: _____

Range: _____

y-intercept: _____

Asymptote: _____

5. $y = \frac{1}{4} \cdot 2^x$



Growth / Decay

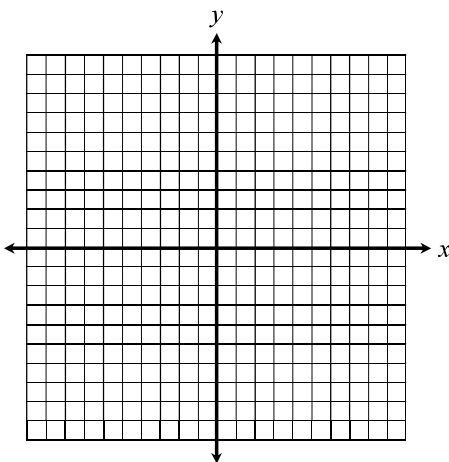
Domain: _____

Range: _____

y-intercept: _____

Asymptote: _____

6. $y = 5\left(\frac{1}{2}\right)^x - 3$



Growth / Decay

Domain: _____

Range: _____

y-intercept: _____

Asymptote: _____