Name_____

Exponential Functions

Date_____ Period_____

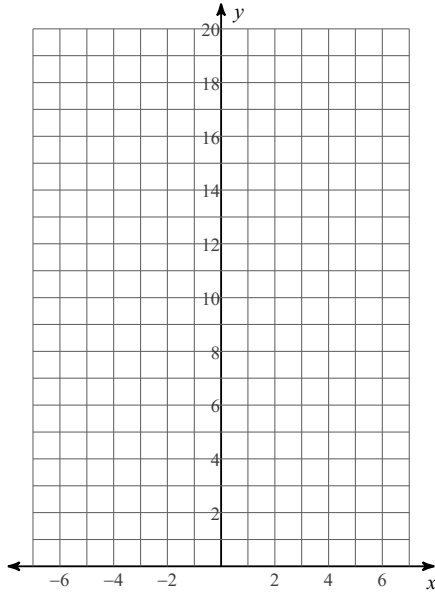**Sketch the graph of each function.**

1) $y = 4^x$

2) Create a table of values.

Growth or Decay: _____

y-intercept _____

Domain_____

Range _____
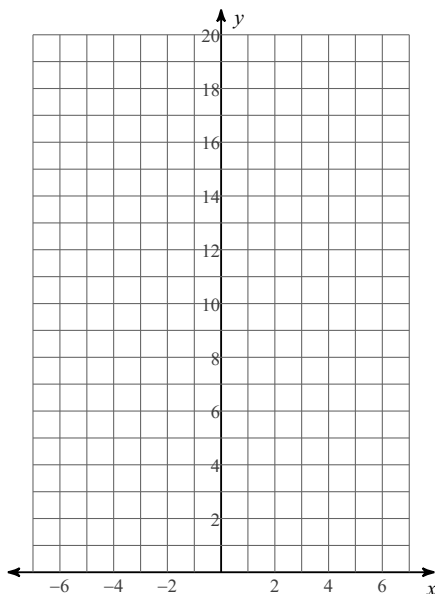
Asymtote _____

As x approches ∞ y approaches _____ .

As x approches −∞ y approaches _____ .

Sketch the graph of each function.

3) $y = \frac{1}{4} \cdot 8^x$

4) Create a table of values.

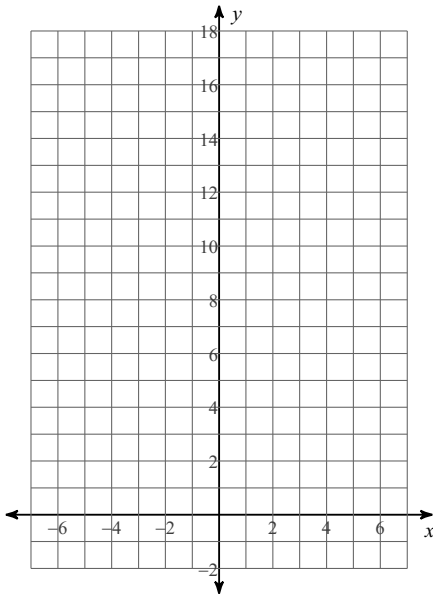Growth or Decay: _____

y-intercept _____

Domain_____

Range _____

Asymtote _____

As x approches ∞ y approaches _____ .

As x approches −∞ y approaches _____ .

Sketch the graph of each function.

5) $y = 3^x - 2$

6) Create a table of values.

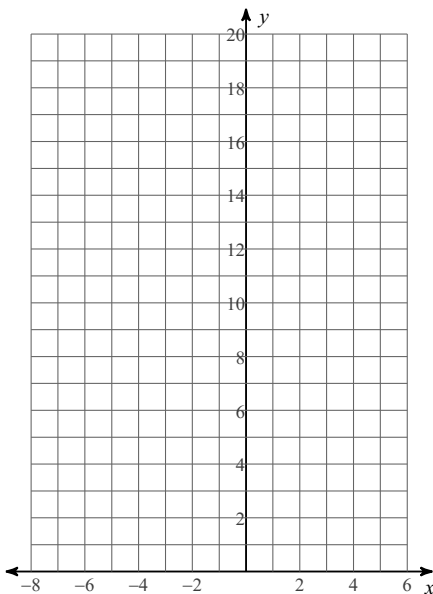Growth or Decay: _____

y-intercept _____

Domain_____

Range _____

Asymtote _____

As x approches ∞ y approaches _____ .

As x approches −∞ y approches _____ .

Sketch the graph of each function.

7) $y = \left(\dfrac{1}{2}\right)^{x+1}$

8) Create a table of values.

Growth or Decay: _____
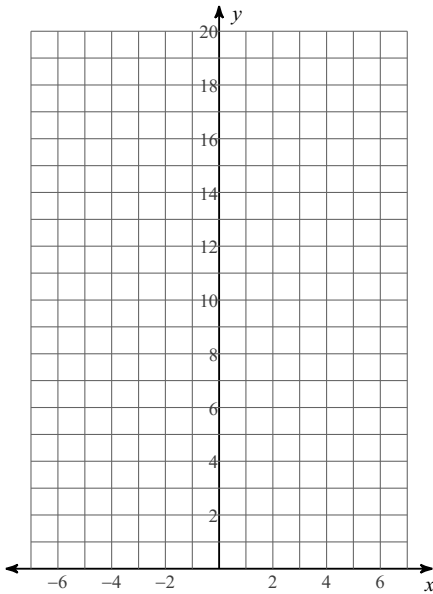
y-intercept _____

Domain_____

Range _____

Asymtote _____

As x approches ∞ y approaches _____ .

As x approches −∞ y approches _____ .

Sketch the graph of each function.

9) $y = 2^x$

10) Create a table of values.

Growth or Decay: _____

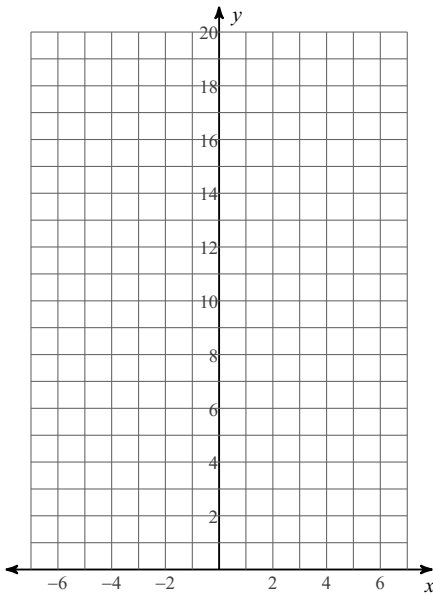y-intercept _____

Domain_____

Range _____

Asymtote _____

As x approches ∞ y approaches _____ .

As x approches −∞ y approches _____ .

Sketch the graph of each function.

11) $y = 3 \cdot \left(\dfrac{1}{2}\right)^x$

12) Create a table of values.

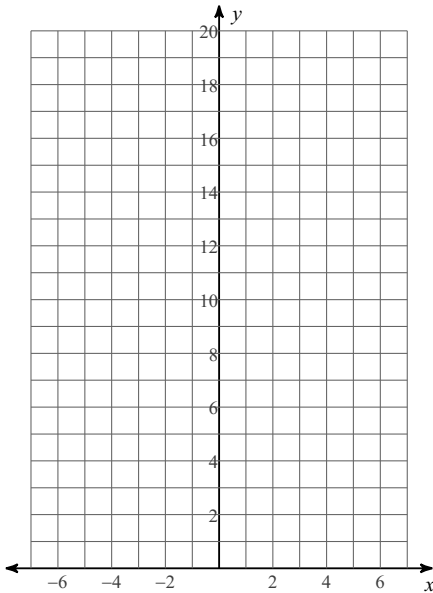Growth or Decay: _____

y-intercept _____

Domain_____

Range _____

Asymtote _____

As x approches ∞ y approaches _____ .

As x approches −∞ y approches _____ .

-3-

Sketch the graph of each function.

13) $y = \left(\dfrac{1}{4}\right)^{x} + 1$

14) Create a table of values.

Growth or Decay: _____
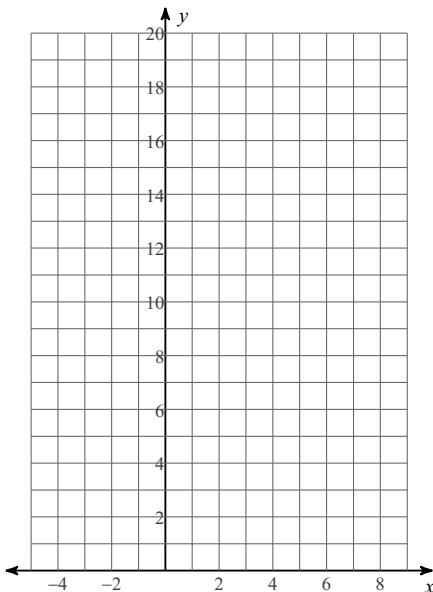
y-intercept _____

Domain_____

Range _____

Asymtote _____

As x approches ∞ y approaches _____ .

As x approches −∞ y approches _____ .

Sketch the graph of each function.

15) $y = 4 \cdot \left(\dfrac{1}{2}\right)^{x-2}$

16) Create a table of values.

Growth or Decay: _____

y-intercept _____

Domain_____

Range _____

Asymtote _____

As x approches ∞ y approaches _____ .

As x approches −∞ y approches _____ .