Algebra H
8.5-8.6 Review Day 1 HW

Name: key
Period:
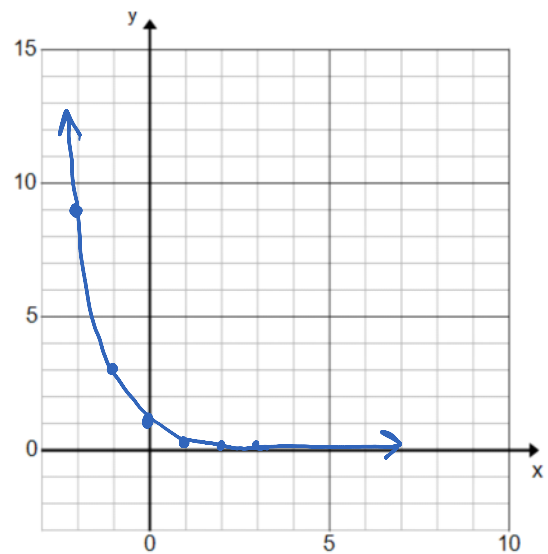
1. $y = 4^x$

x	-2	-1	0	1	2	3
y	1/16	1/4	1	4	16	64
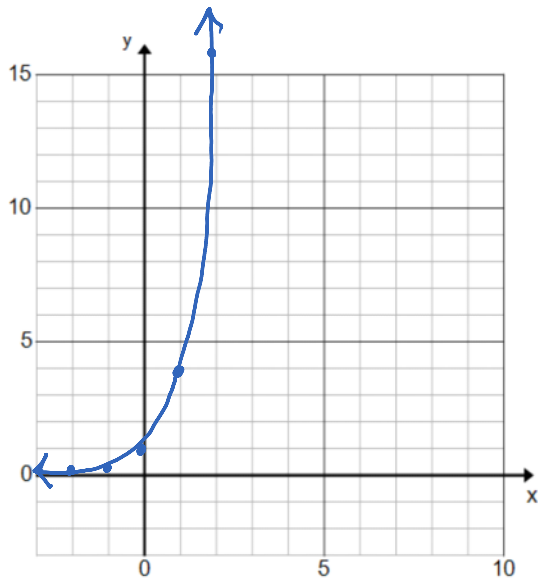
2. $y = \left(\dfrac{1}{3}\right)^x$

x	-2	-1	0	1	2	3
y	9	3	1	1/3	1/9	1/27

Determine if each of the following represents exponential GROWTH or DECAY

3) $y = 3^x$

G

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

D

5) $y = (3.3)^x + 8$

G

6) $y = \left(\dfrac{4}{5}\right)^{x+3} - 9$

D

7) $y = \left(\dfrac{9}{4}\right)^x$

G

8) $y = \left(\dfrac{10}{9}\right)^{-x} \approx \left(\dfrac{9}{10}\right)^x$

D

9) $y = (2)^{-x} + 3 \approx \left(\dfrac{1}{2}\right)^x + 3$

D

10) $y = (1.01)^x - 3$

G

Linear or exponential? Decide if the equation is linear or exponential and then write an equation that represents the "rule" for the table:

11

+1 +1 +1 +1 +1

x	-1	0	1	2	3	4
y	$\frac{1}{4}$	$\frac{1}{2}$	1	2	4	8

×2 ×2 ×2 ×2 ×2

exponential growth

$$y = \frac{1}{2}(2)^x$$

12.

+1

x	-2	-1	0	1	2	3
y	32	16	8	4	2	1

×$\frac{1}{2}$

exp. decay

$$y = 8\left(\frac{1}{2}\right)^x$$

13.

+1 +1

x	-2	-1	0	1	2	3
y	1	4	16	64	256	1024

×4

exp. growth

$$y = 16(4)^x$$

14.

+1 +1

x	0	1	2	3	4	5
y	2	4	6	8	10	12

+2 +2

linear

$$y = 2x + 2$$

15.

+1

x	-2	-1	0	1	2	3
y	162	54	18	6	2	$\frac{2}{3}$

×$\frac{1}{3}$

16.

+1

x	-2	-1	0	1	2	3
y	-5	-9	-13	-17	-21	-25

-4 -4

$$\times \frac{1}{3}$$

exp. decay

$$y = 18\left(\frac{1}{3}\right)^x$$

$-4 \quad -4$

Linear

$$y = -4x - 13$$