MATCH THE CORRECT ANSWER.

BE-1B MONDAY 3-26-07

WELCOME BACK

① $y = a^x$

WHERE $a > 1$

② $y = a^x$

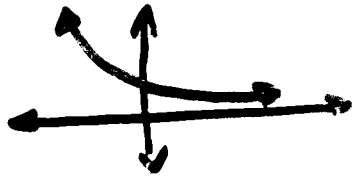
WHERE $a < 0$

③ $y = a^x$

WHERE $0 < a < 1$

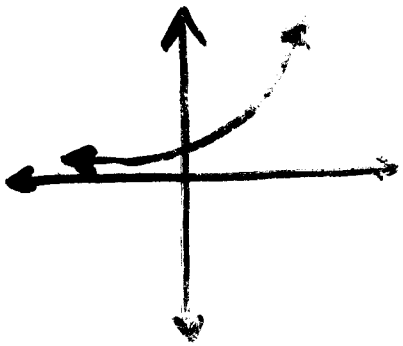
THIS MEANS a is between 0 and 1

④ A CURVE THAT APPROACHES BUT NEVER TOUCHES A LINE

ⓐ 

ⓑ ASYMPTOTE

ⓒ NOT EXPONENTIAL FUNCTION

ⓓ 

$$3^{-2} = \frac{1}{3^2} = \frac{1}{9}$$

$$4^{-1} = \frac{1}{4^1} = \frac{1}{4}$$

$$\frac{1}{3^{-2}} = \frac{1}{\frac{1}{3^2}} = \frac{1}{\frac{1}{9}} = 9$$

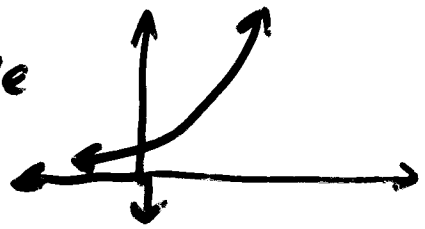
or

$$\frac{1}{3^{-2}} = 3^2 = 9$$

Compare

$$3^{-2} = \frac{1}{3^2} = \frac{1}{9}$$

If $y = 3^x$ looks like



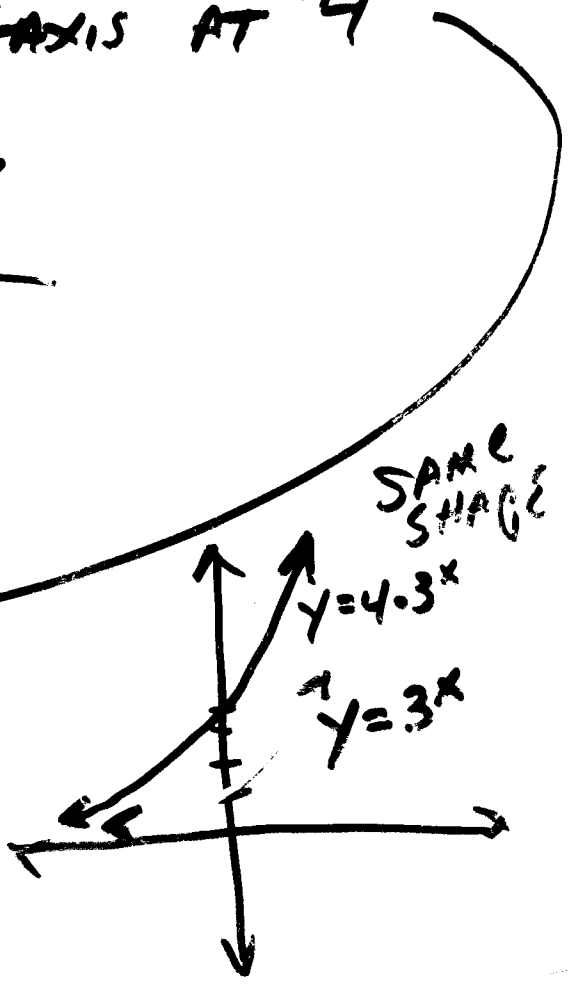
$y = 3^x + 1$ moves up one unit

$y = 3^x - 2$ moves down two units

$y = 3^{x-1} - 2$ moves down two units and moves right one unit

$y = 4 \cdot 3^x$ gets steeper, crossing y-axis at +4

x	3^x	$4 \cdot 3^x$
-2	$\frac{1}{9}$	$\frac{4}{9}$
-1	$\frac{1}{3}$	$\frac{4}{3}$
0	1	4
1	3	12
2	9	36



Examples Pg 558-559

(#14) Graph. State the y-intercept. Use the graph to approximate the given expression.

$y = 10^x$, $10^{0.3}$

(#15) $y = \left(\frac{1}{10}\right)^x$, $\left(\frac{1}{10}\right)^{-1.3}$

(#27 to 32) Exponential or Not?

HW: EP Pg 843 #1, 2, 3, 4, 6, 10
LESSON 10-5