

Sec 3.1 Exponential Func. & their graphs pg 225 #1-41 EOO

#1) $(3.4)^{6.8}$
 ≈ 4112.633

#5) $\sqrt[3]{7493}$
 ≈ 19.568

#9) $e^{9.2}$
 ≈ 9897.129

#13) $f(x) = 16(4^{-x})$
 $g(x) = (\frac{1}{4})^{x-2}$
 $h(x) = 16(2^{-2x})$

$f(x) = 16(4^{-x})$
 $= 4^2(4^{-x})$
 $= 4^{2-x}$
 $= (\frac{1}{4})^{-1(2-x)}$
 $= (\frac{1}{4})^{x-2}$
 $= g(x) \checkmark$

and $f(x) = 16(4^{-x})$
 $= 16(2^2)^{-x}$
 $= 16(2^{-2x})$
 $= h(x)$

#17) $f(x) = 2^{-x}$
 Falls to the right

Horiz. Asymptote: $y = 0$

Intercept: $(0, 1)$

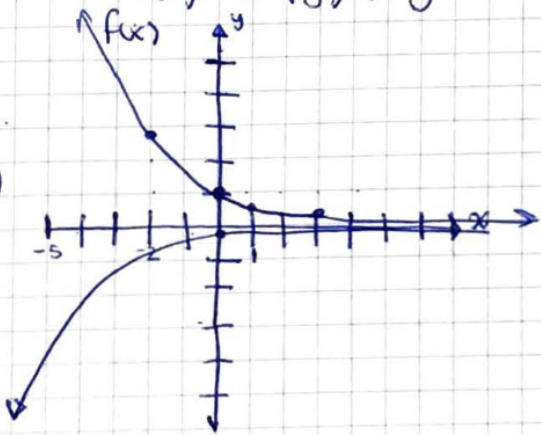
Graph (e)

#21) $f(x) = -2^{x-2}$ shift right
 $= -(2^{x-2})$; Falls to the right.
 Horiz. Asym: $y = 0$

Intercept $(0, -2^{-2}) \rightarrow (0, -1/4)$

Graph (a)

#25) $f(x) = (\frac{3}{5})^x$, $g(x) = -(\frac{3}{5})^{x+4}$



x	y
-2	2.78
0	1
1	.6
3	.216

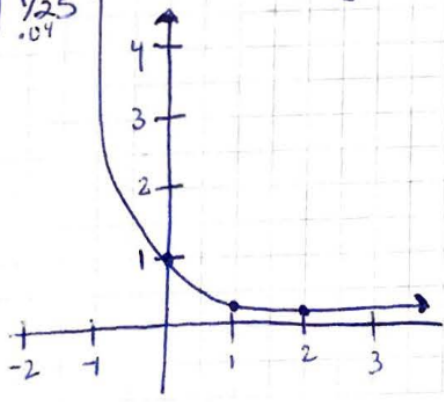
Horizontal shift 4 units to the left, then reflected over x-axis $-f(x+4)$

y-int: $(0, -3/625)$
 $(0, -0.0048)$

#29) $f(x) = (\frac{1}{5})^x = 5^{-x}$

x	y
-2	25
-1	5
0	1
1	1/5 = .2
2	1/25 = .04

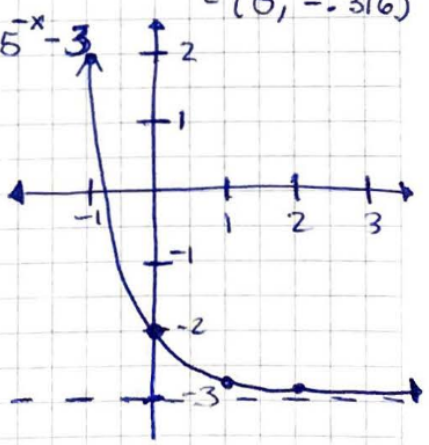
- a) Asym: $y = 0$
- b) Intercept: $(0, 1)$
- c) Decreasing b/c negative



#33) $g(x) = 5^{-x} - 3$

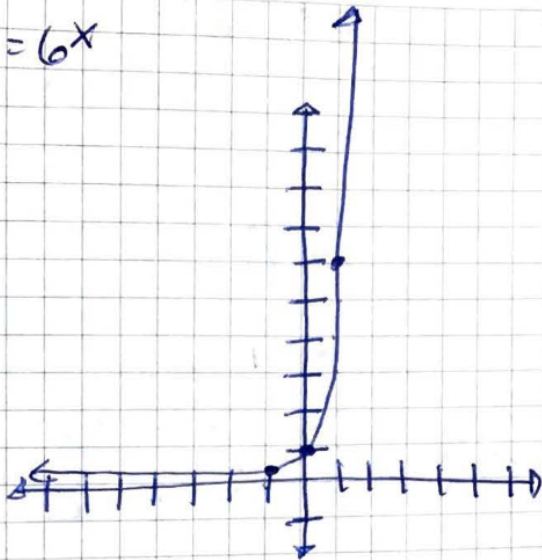
x	y
-1	2
0	-2
1	-2.8
2	-2.96

- a) Asym: $y = -3$
- b) Intercept: $(0, -2)$
- c) Decreasing b/c



#37) $f(x) = 6^x$

x	y
-1	0.167
0	1
1	6
2	36



#41) $f(x) = 3e^{x+4}$

x	y
-7	0.149
-6	0.406
-5	1.0104
-4	3
-3	8.0155

