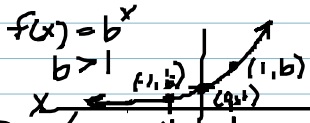
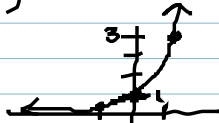


8.1 Graphing Exponential Functions (pg 475)

EX #1: $y = 3^x$

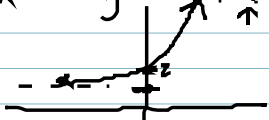
x	y
0	1
1	3
-1	$\frac{1}{3}$



$f(x) = ab^{x-h} + k$

$a < 0$: reflected
 $|a| > 1$: compressed - getting closer to y-axis
 $0 < |a| < 1$: expanded - further away from y-axis

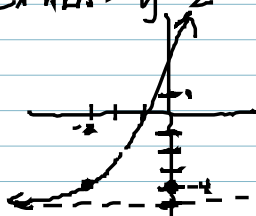
EX #2a: $y = 2^{x-2} + 1$



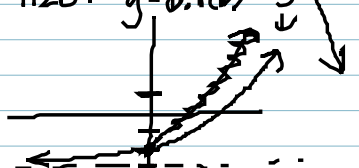
EX #2b: $y = -\frac{1}{2} \cdot 5^{x-2} + 0$



EX #2A: $y = 2^{x+3} - 5$



#2B: $y = 0.1(6)^{x-3} - 3$



EX #3: $\text{pop} = 3929,214$

$b = 2.03\%$ Growth

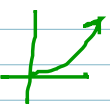
$y = \text{Pop}(\text{Growth})^t$
 $y = ab^t$ $y = a(1+r)^t$

$y = 3929214 (1.0203)^t$

x - when = 0 y - when = 0
 x - when = 25 y - when = 4,000,000
 x - when = 25 y - when = 0

$A(t) = A(1+r)^t$

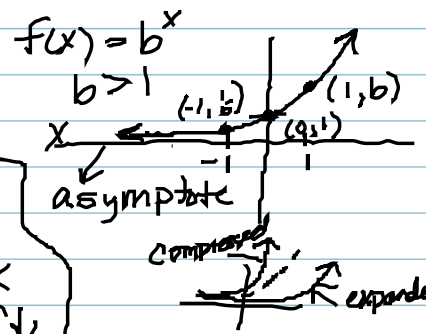
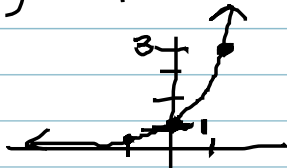
Pg 479 #1
 $y = 1(1+.25)^t$



8.1 Graphing Exponential Functions (pg 475)

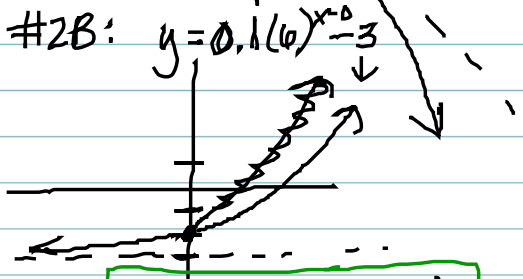
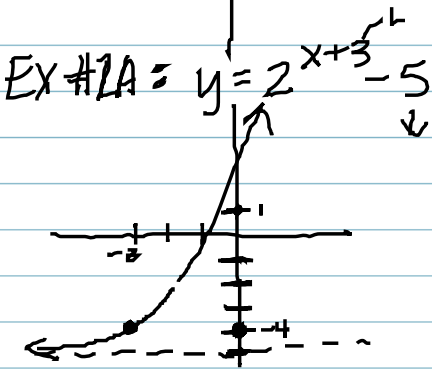
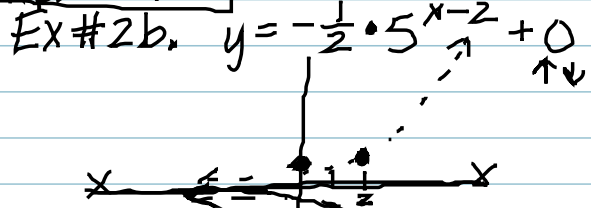
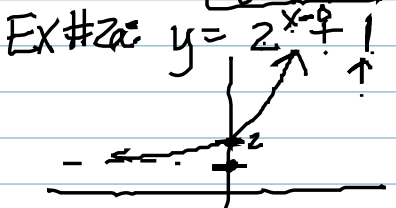
Ex #1: $y = 3^x$

x	y
0	1
1	3
-1	$\frac{1}{3}$



$f(x) = ab^{x-h} + k$

$a < 0$ ∴ reflected
 $|a| > 1$ ∴ compressed - getting closer to y-axis
 $0 < |a| < 1$ ∴ expanded - further away from y-axis



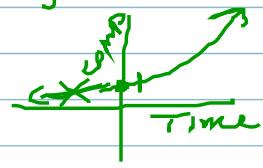
$A(t) = a(1+r)^t$

Ex #3 a = pop = 3,929,214
 b = 2.03% Growth

Pg 479 #7

$y = \text{Pop}(\text{growth})$
 $y = ab^t$
 $y = 3929214(1.0203)^t$

$y = 1(1+.25)^t$



x-min = 0 y-min = 0
 x-max = 250 y-max = 4,000,000
 x-scl = 25 y-scl = 100