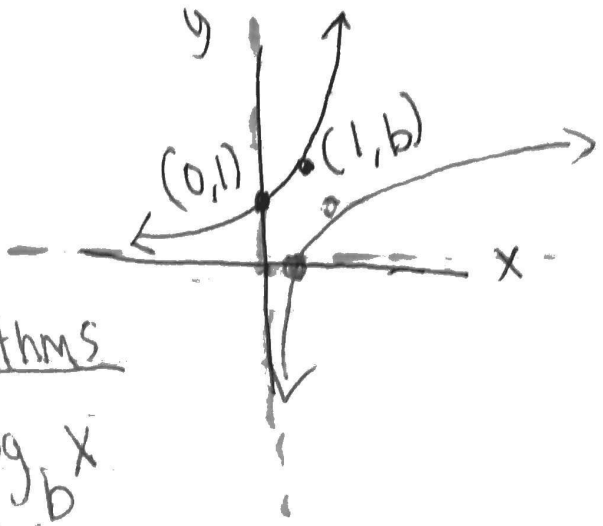
CTAATb | How do I graph exponential and Logarithmic ~~Graphs~~ Equations? 2/7

Parent Functions



Exponential

$y = b^x$

(0, 1)

(1, b)

Logarithms

$y = \log_b x$

(1, 0)

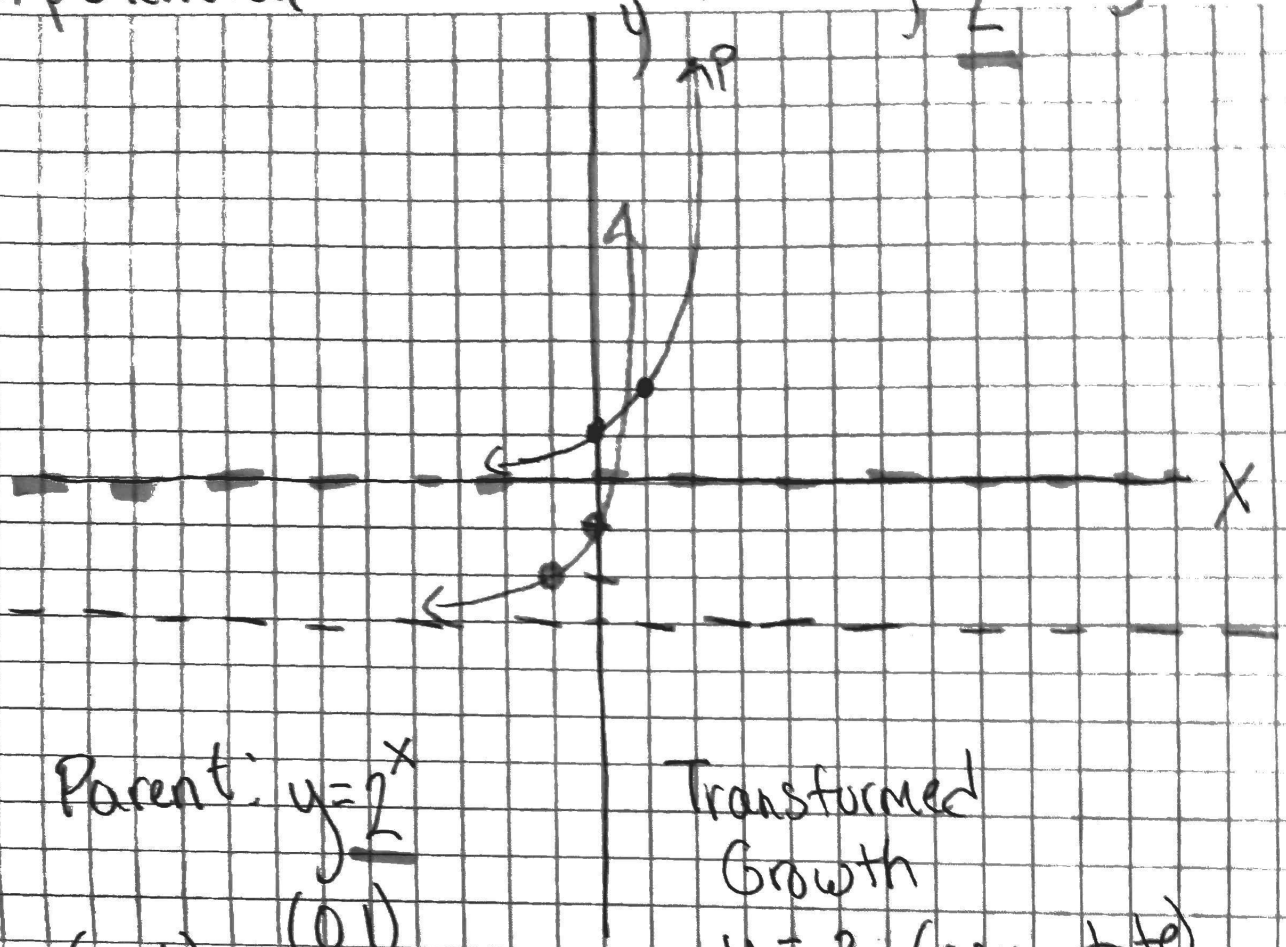
(b, 1)

Transformed Equations

Exponential	Logarithms
$y = b^{(x-h)} + k$	$y = \log_b (x-h) + k$
$y = k$ (asymptote)	$x = h$ (asymptote)

Exponential

Transformed: $y = 2^{x+1} - 3$



Parent: $y = 2^x$

(0, 1)

(1, b) (1, 2)

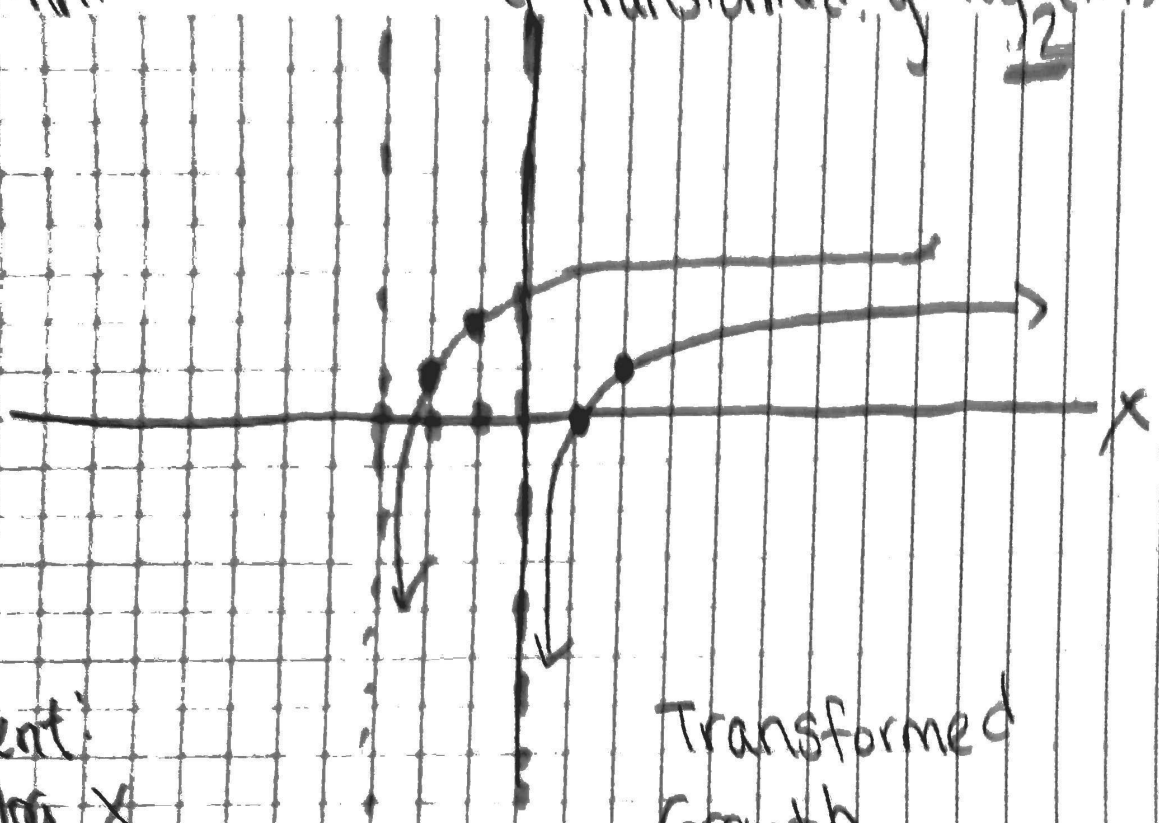
Transformed

Growth

$y = -3$ (asymptote)

Left 1, down 3

Logarithm



Transformed: $y = \log_2(x+3)+1$

Parent:
$y = \log_2 x$
(1,0)
(2,1)

Transformed
Growth
$x = -3$
Left 3, up 1