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Graphing Exponential Decay

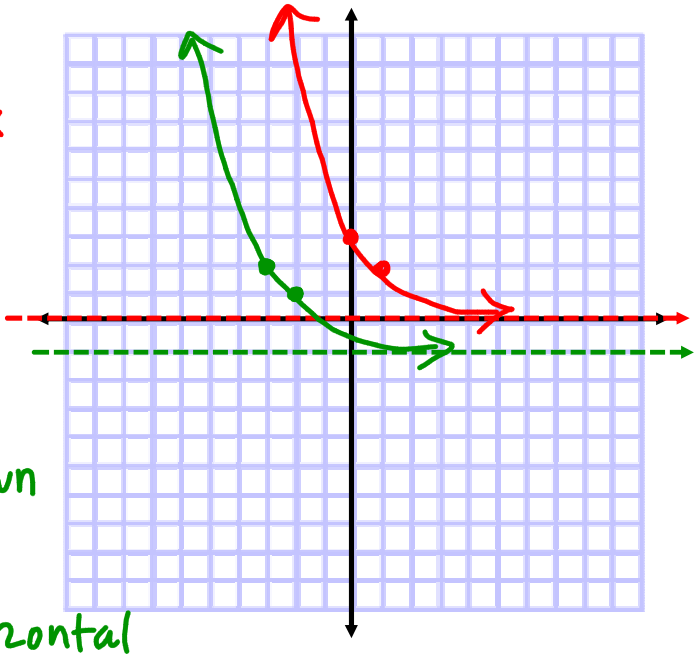
$y = 3\,(2/3)^{x+3} - 1$

Parent: $y = 3\left(\frac{2}{3}\right)^x$

$3\left(\frac{2}{3}\right)^0 = 3 \cdot 1 = 3$

$3\left(\frac{2}{3}\right)^1 = 3 \cdot \frac{2}{3} = 2$

Graph (0 , 3)
(1 , 2)



$y = 3\,(2/3)^{x+3} - 1$

1 down

3 left

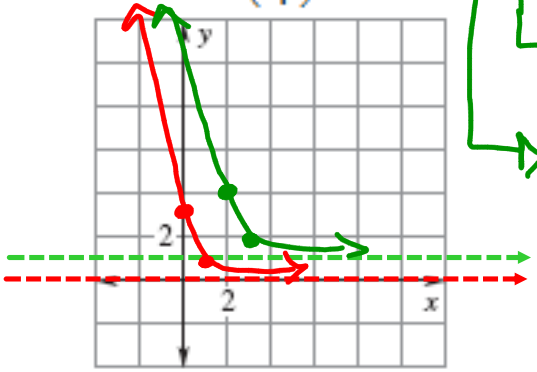
horizontal asymptote at -1

Domain: Real

Range: $y > -1$

3

$f(x) = 3\left(\frac{1}{4}\right)^{x-2} + 1$



Parent: $f(x) = 3\left(\frac{1}{4}\right)^x$

$(0, 3)$ $(1, \frac{3}{4})$

2 right

up 1

Domain: Real

Range: $y > 1$

$y > 1$