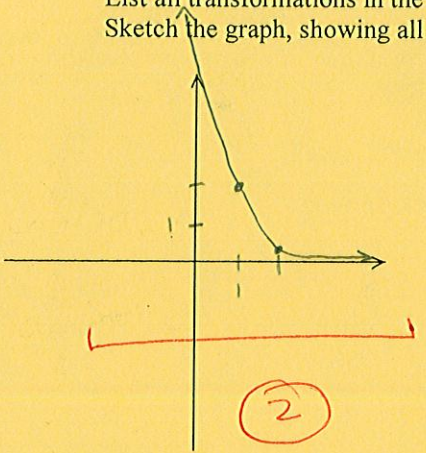
[5 PTS] Sketch the graph of $f(x) = \frac{1}{3}(6^{-x+2})$ using transformations as shown in lecture.

List all transformations in the correct order, and show the transformation of each significant feature as shown in lecture.
Sketch the graph, showing all the transformed features you found.



① LEFT 2

② REFLECT OVER y-AXIS

③ COMPRESS INTO X-AXIS BY $\frac{1}{3}$

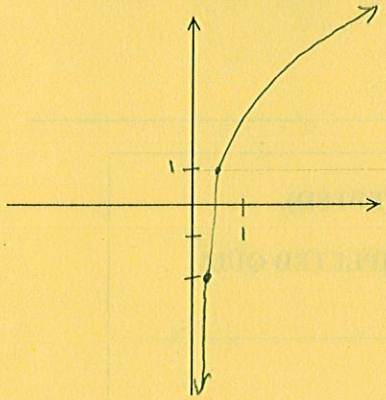
$(0,1) \xrightarrow{①} (-2,1) \xrightarrow{②} (2,1) \xrightarrow{③} (2,\frac{1}{3})$

$(1,6) \quad (-1,6) \quad (1,6) \quad (1,2)$

$y=0 \quad y=0 \quad y=0 \quad y=0$

[5 PTS] Sketch the graph of $f(x) = 3\log_{\frac{1}{2}}(4x) - 2$ using transformations as shown in lecture.

List all transformations in the correct order, and show the transformation of each significant feature as shown in lecture.
Sketch the graph, showing all the transformed features you found.



(2)

① STRETCH VERTICALLY BY 3

② DOWN 2

③ COMPRESS INTO y-AXIS BY $\frac{1}{4}$

$(1,0) \xrightarrow{①} (1,0) \xrightarrow{②} (1,-2) \xrightarrow{③} \left(\frac{1}{4},-2\right)$

$\left(\frac{3}{2},1\right)$	$\left(\frac{3}{2},3\right)$	$\left(\frac{3}{2},1\right)$	$\left(\frac{3}{8},1\right)$
$x=0$	$x=0$	$x=0$	$x=0$