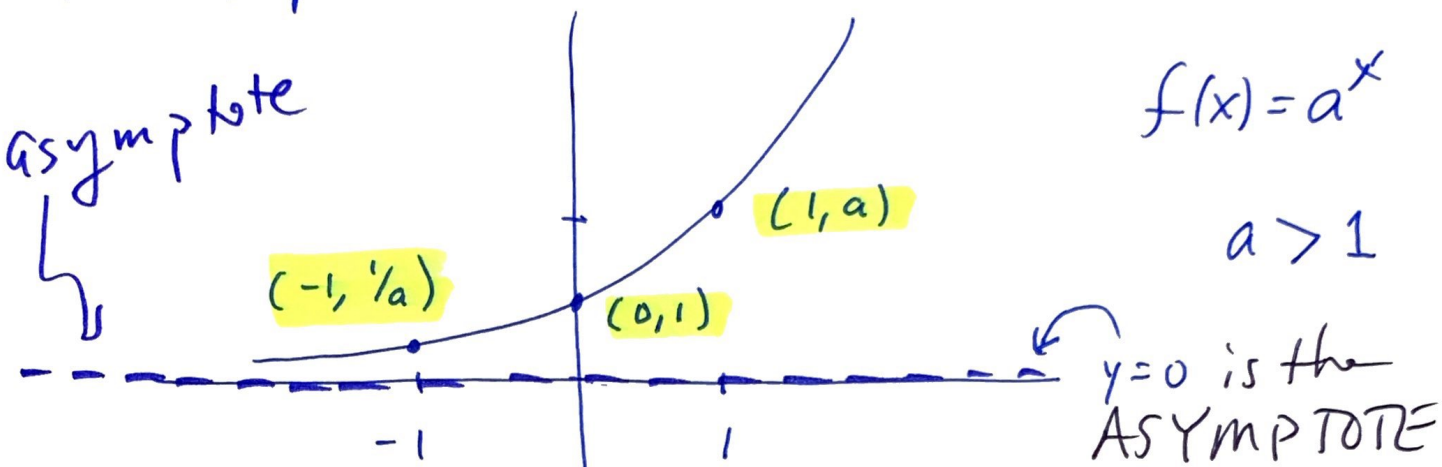
4.2 Graphing exponential functions

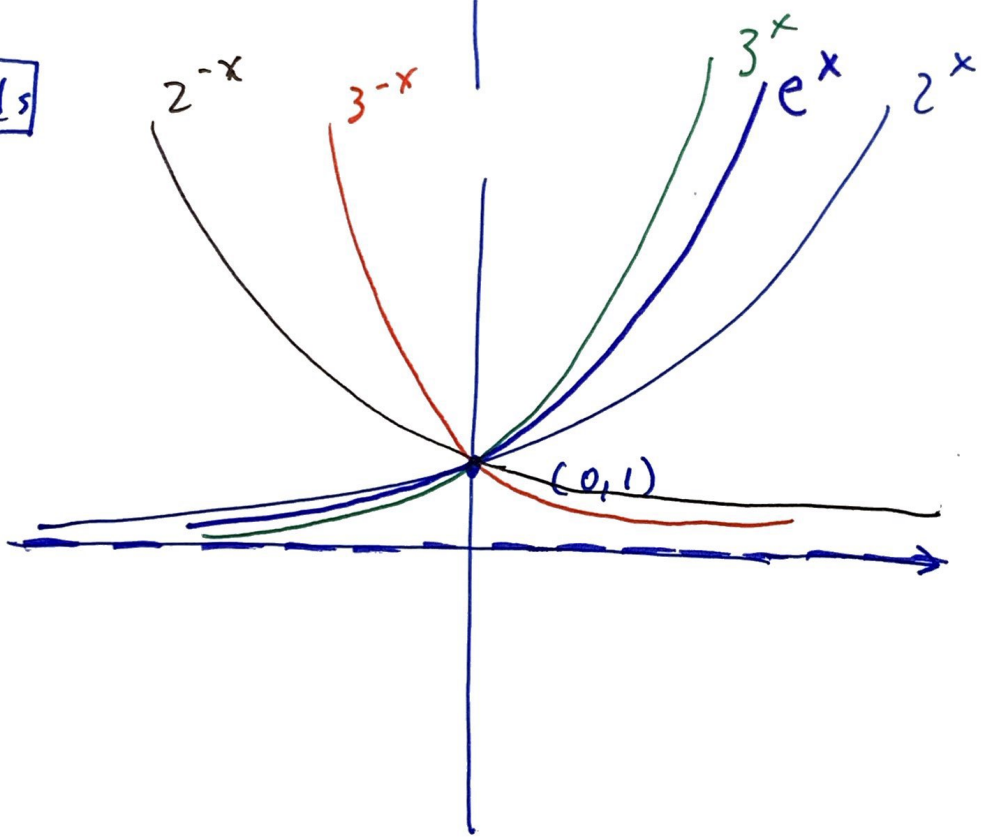
Compare graphs with different bases.



$f(x) = a^x$

$a > 1$

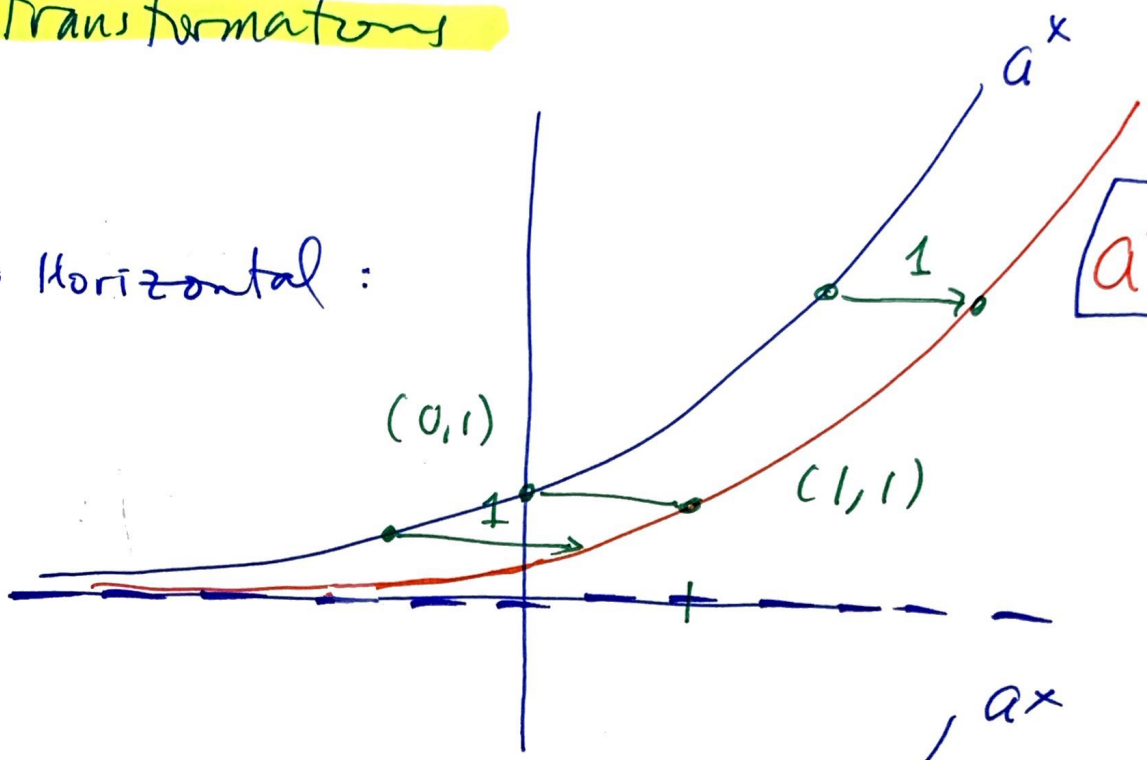
Trends



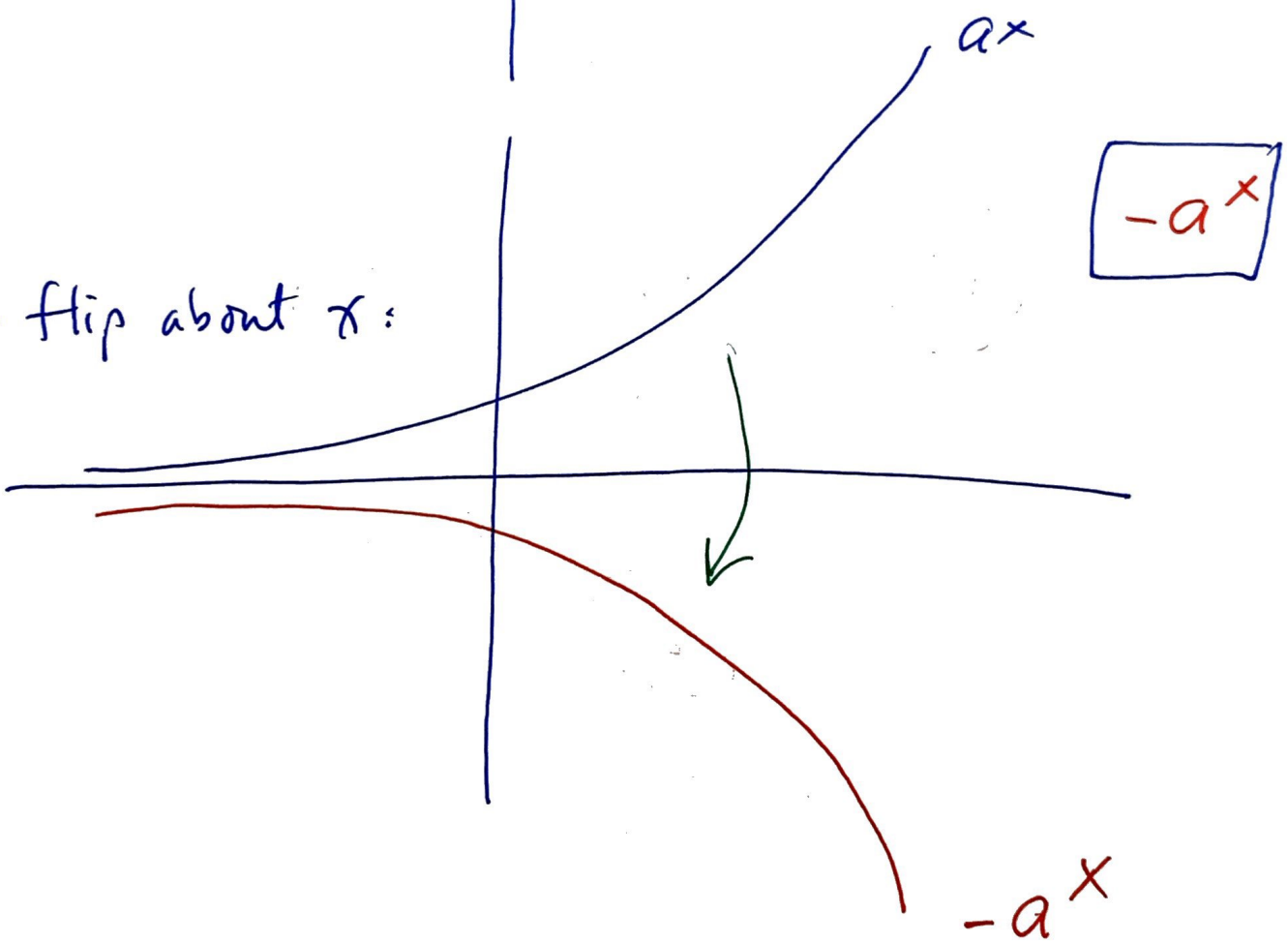
(*) base "e", the natural number

$2 < e = 2.718281828 < 3$

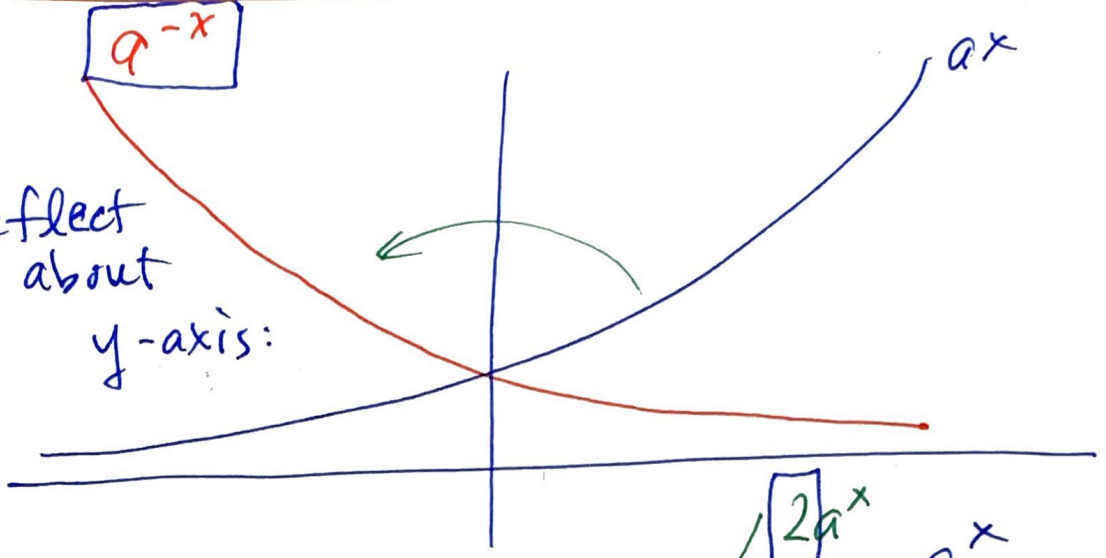
⊗ Transformations



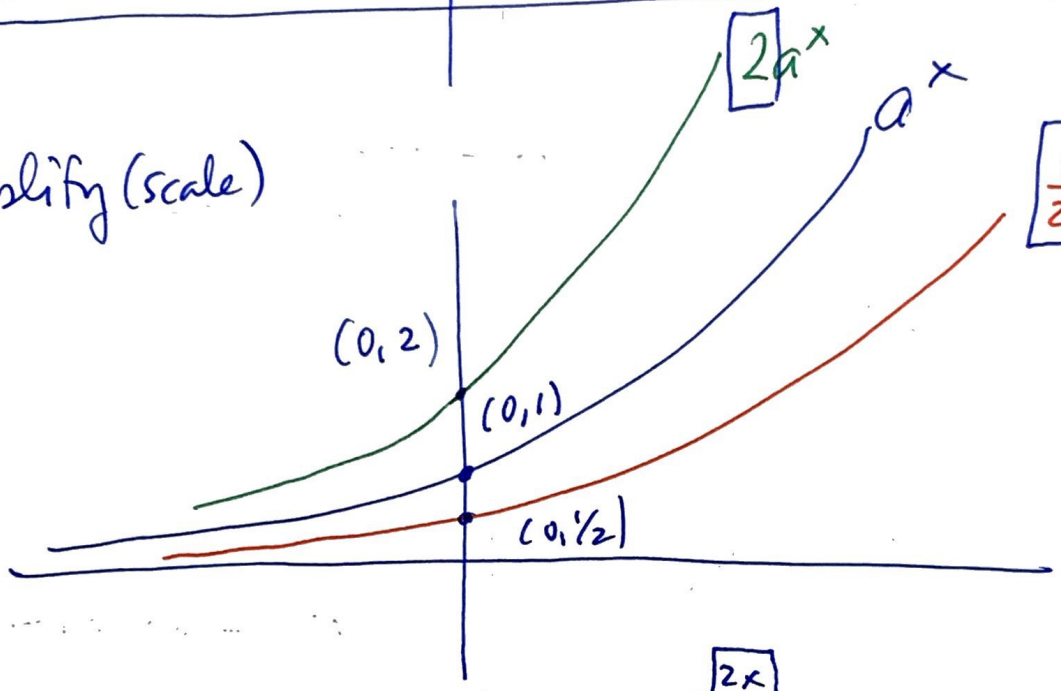
• Horizontal :



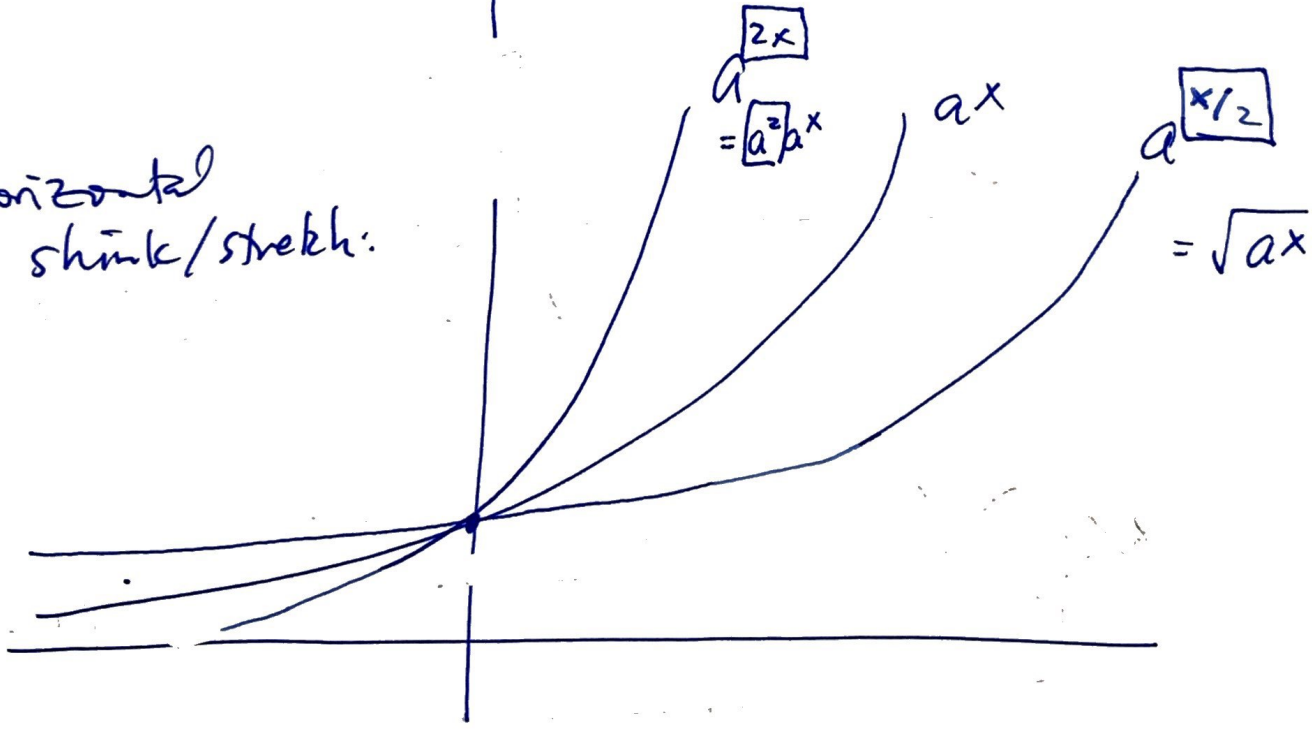
• flip about x :



- reflect about y-axis:

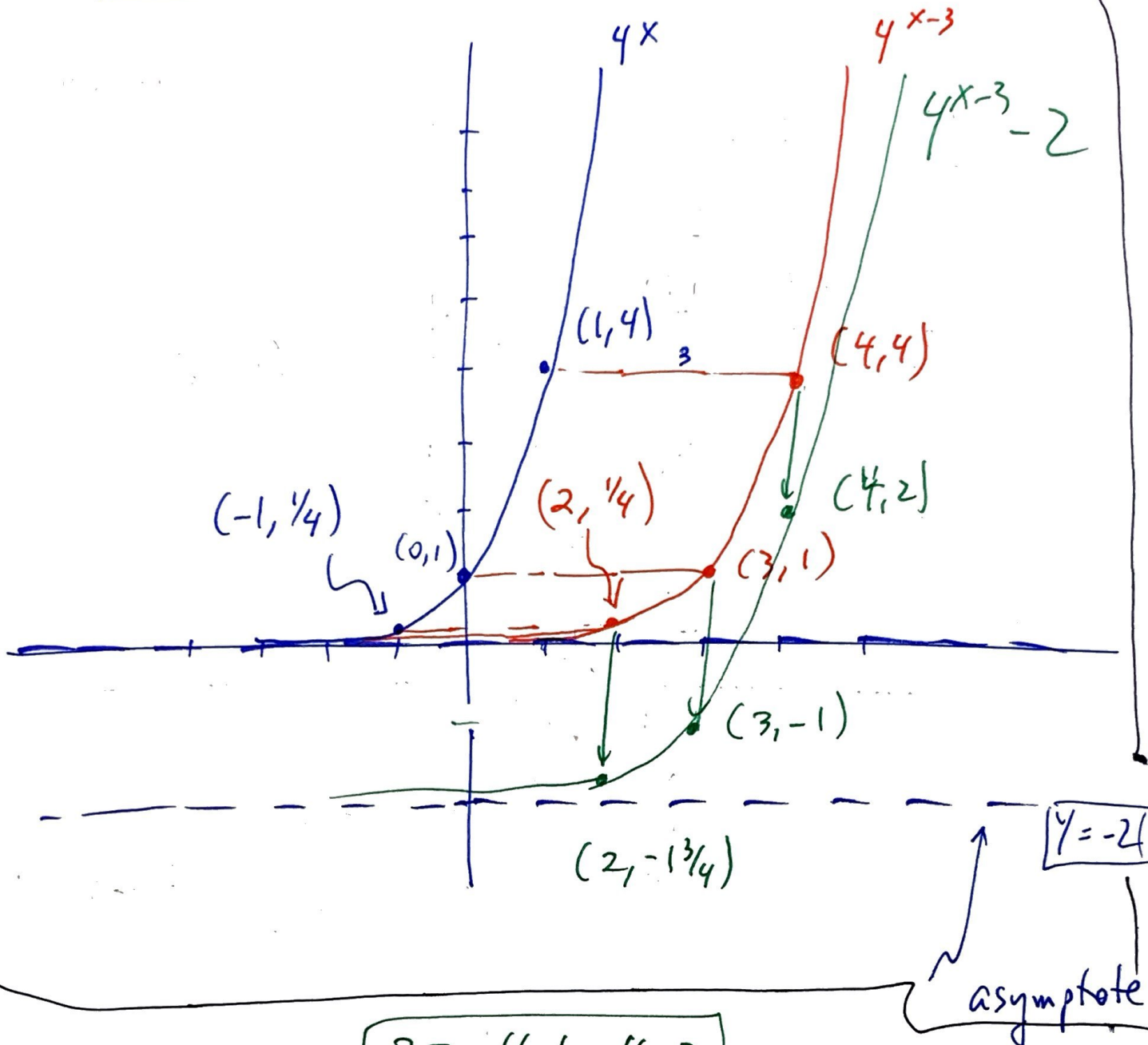


- amplify (scale)



- horizontal shrink/stretch:

Ex Sketch $h(x) = 4^{x-3} - 2$



3.7 4.1, 4.2