

2.5E HSRV III: General Points

A. Introduction

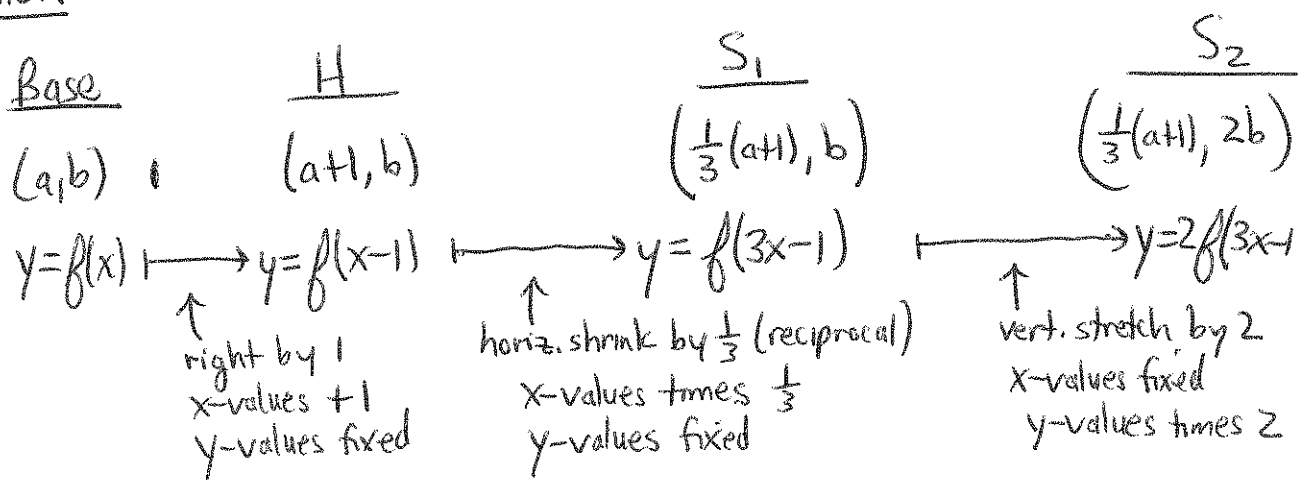
Goal: Determine how a symbolic point (a, b) transforms under a set of HSRV transformations.

Idea: Use coordinate rules (as in moving shapes) and apply to symbols in (a, b)

B. Example

Suppose that (a, b) is on the graph of f .
What is the corresponding point on the graph of g , where
 $g(x) = 2f(3x-1) + 5$?

Solution



$$\begin{array}{c} \underline{V} \\ (\frac{1}{3}(a+1), 2b+5) \end{array}$$

$$\xrightarrow{\text{up } 5} y=2f(3x-1)+5$$

$$\text{Ans: } \boxed{(\frac{1}{3}a + \frac{1}{3}, 2b+5)}$$