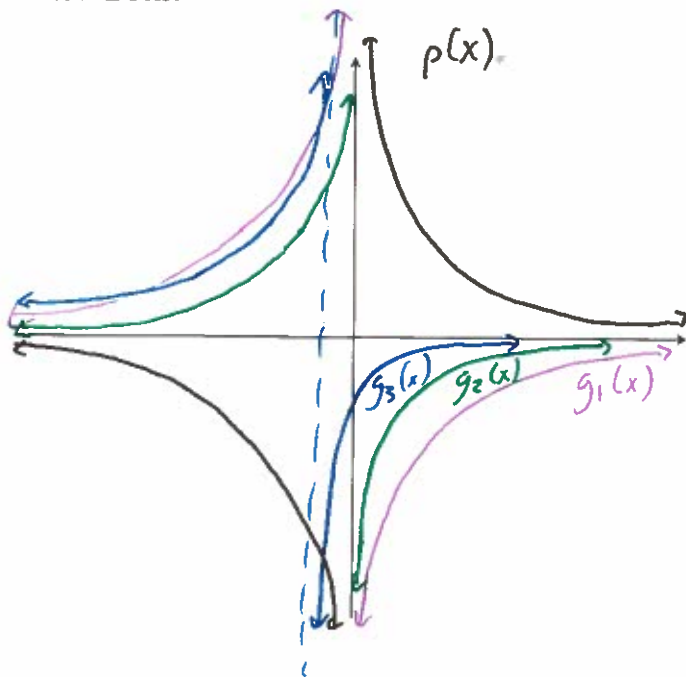


Quick Hit 2

1. Suppose you are given a parent function  $f(x)$  and you are asked to graph the function  $g(x) = Af(B(x-h)) + k$ . Give a list of the transformations you would apply to the graph of  $f(x)$  in order to obtain the graph of  $g(x)$  in the order in which you would apply them (there are multiple correct answers, but you only have to give one).

- ① vertical stretch by a factor of  $A$
- ② horizontal stretch by a factor of  $\frac{1}{B}$
- ③ vertical shift by  $k$  units (up)
- ④ horizontal shift by  $h$  units (right)

2. Graph the function  $g(x) = \frac{-1}{2x+1}$  on the axes below. Is the function even? Odd? Neither? Both?



- parent function:  $p(x) = \frac{1}{x}$
- $g(x) = \frac{-1}{2(x+1/2)}$  so we have a

- $g_1 \rightarrow$  ① vertical reflection
- $g_2 \rightarrow$  ② horizontal stretch by a factor of  $\frac{1}{2}$
- $g_3 \rightarrow$  ③ horizontal shift to the left  $\frac{1}{2}$  unit

the final graph is in blue