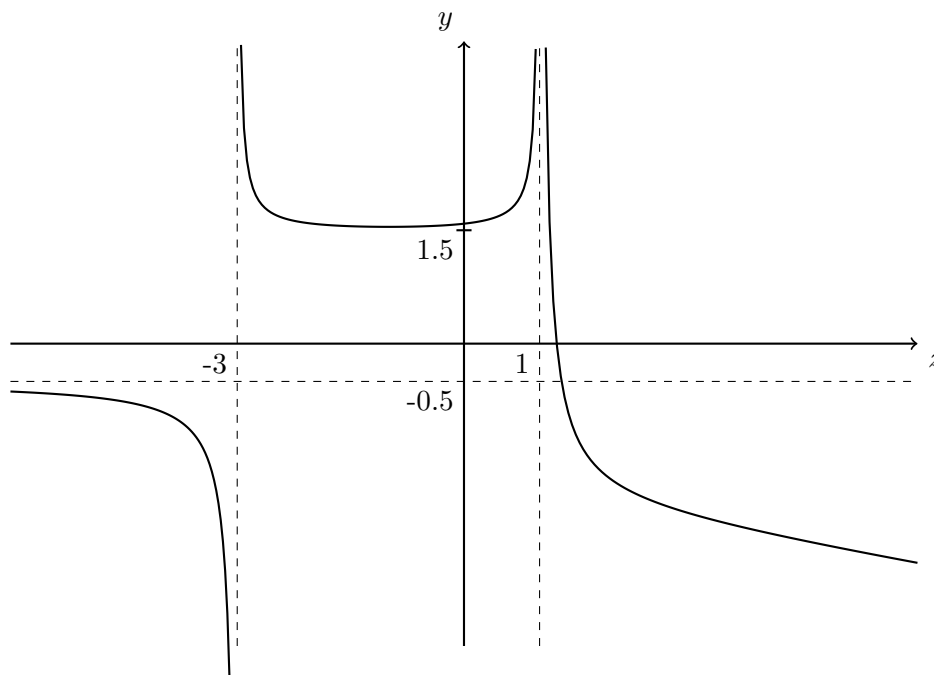


5. [6 points] Consider the following graph of a function $A(z)$. Assume the behavior of $A(z)$ depicted on the left and right of the graph continues as z approaches $-\infty$ and ∞ , respectively.



- a. [3 points] Write down equations for all vertical and horizontal asymptotes of $A(z)$.

The vertical asymptote(s) of $A(z)$ are _____

The horizontal asymptote(s) of $A(z)$ are _____

- b. [3 points] Calculate the following limits.

(i) $\lim_{z \rightarrow -3^+} A(z) =$ _____

(iii) $\lim_{z \rightarrow 3^+} A(-z) =$ _____

(iv) $\lim_{z \rightarrow -\infty} 3A(z/2) =$ _____