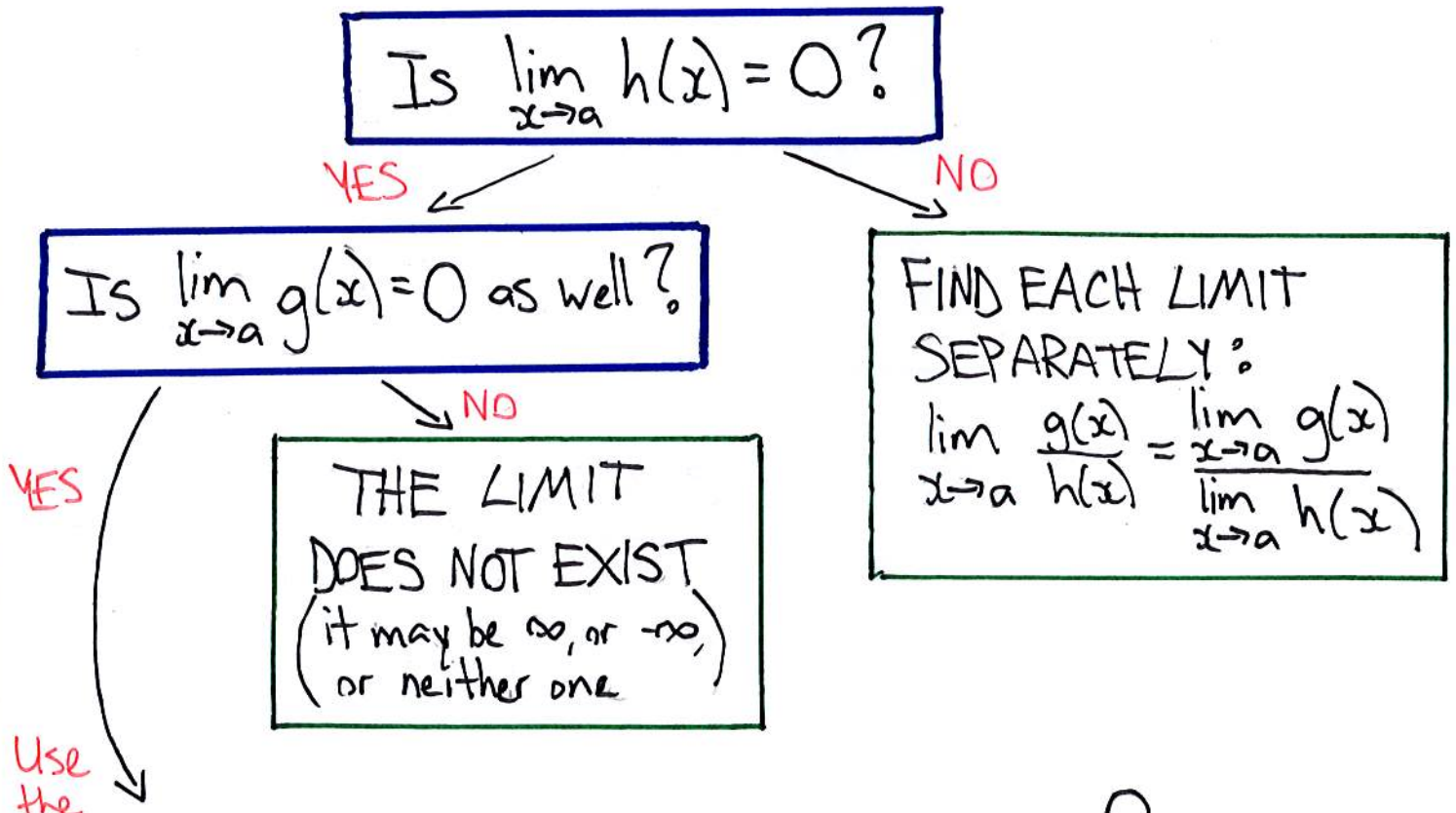


# FLOWCHART #2 : FINDING $\lim_{x \rightarrow a} \frac{g(x)}{h(x)}$ (AT A POINT)



## STRATEGY FOR INDETERMINATE FORM $\frac{0}{0}$ :

1 Replace  $\frac{g(x)}{h(x)}$  with another function (let's call it  $p(x)$ ) which takes on the same values everywhere except  $x = a$ .

**HOW?** → Factor both numerator and denominator, then cancel any common factors to get  $p(x)$ .  
→ If there is a  $\sqrt{\quad}$ : Multiply by the conjugate, then expand, simplify, and cancel common factors.

2 Evaluate the limit of this new function as  $x$  approaches  $a$ .  
That is,  $\lim_{x \rightarrow a} \frac{g(x)}{h(x)} = \lim_{x \rightarrow a} p(x)$

**HOW?** To find this new limit, go back to Flowchart # 1.