It may help to think of this less as a ‘rule’, and more as a *procedure*. If you know you want to derive a conditional (i.e., you know you want to *introduce* an arrow), then you’ll need to do the following:

i. Establish the *antecedent* of your target conditional as an *assumption* (in other words, assume the antecedent)

ii. Arrive at the *consequent* of your target conditional at any other line (in other words, derive the consequent)

iii. Conclude your target conditional. *Cite the line number where the consequent occurs, and discharge the assumption where the antecedent occurs*

Ex: \(P \lor Q \vdash \lnot P \Rightarrow Q\)

1 (1) \(P \lor Q\) A

2 (2) \(\lnot P\) A *Notice that this is the antecedent of your target conditional*

1,2 (3) \(Q\) 1,2 \(\lor\) E

1 (4) \(\lnot P \Rightarrow Q\) 2 \(\Rightarrow\) I (1)
RAA

It may help to think of this less as a ‘rule’, and more as a procedure. RAA allows you to either introduce a ~, or take one away. It’s like ~I and ~E rolled into a single rule. To do it, you’ll typically begin by identifying your target sentence. Consider the following sequent:

\[ \text{P \vdash \neg
\neg P} \]

We know what our target sentence is pretty quickly here: It’s the conclusion \(\neg\neg P\). Given this, we can use RAA by following a three-step procedure:

i. Assume the denial of the target sentence (in this case, \(\neg P\))
ii. Derive a contradiction (any two sentences where one is the denial of the other)
iii. Conclude the target sentence. Cite the two contradicting lines, and discharge the assumption from step (i.)

Ex: \[ \text{P \vdash \neg \neg P} \]

\[ \begin{align*}
  1 & \quad (1) \quad \text{P} \\
  2 & \quad (2) \quad \neg P \quad \text{A} \quad \text{Notice that this is the denial of your target sentence} \\
  1 & \quad (3) \quad \neg \neg P \quad 1,2 \text{ RAA (2)} \quad \text{Notice that this sentence is the denial of the assumption that} \\
  & \qquad \quad \text{we’re discharging} 
\end{align*} \]