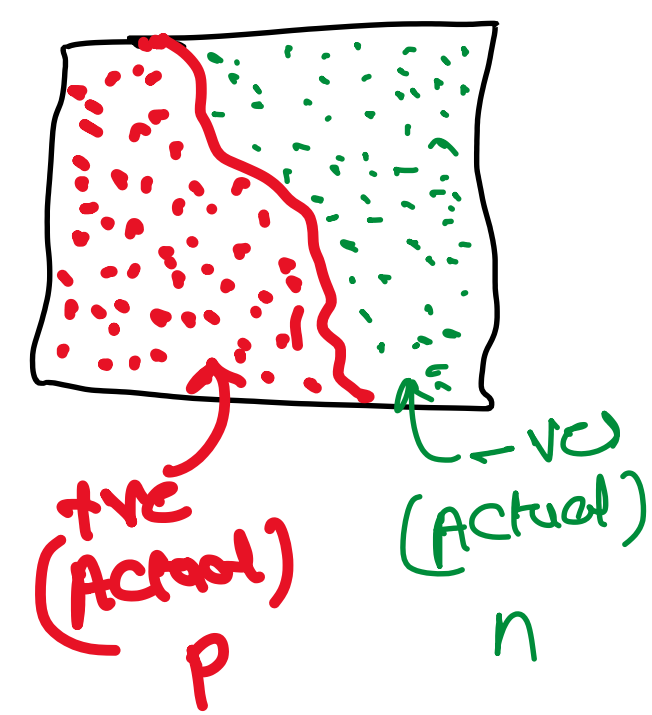


Evaluation of RAG

- ① Context Recall
- ② Context Precision
- ③ Context Relevance
- ④ Answer Relevance
- ⑤ Groundness

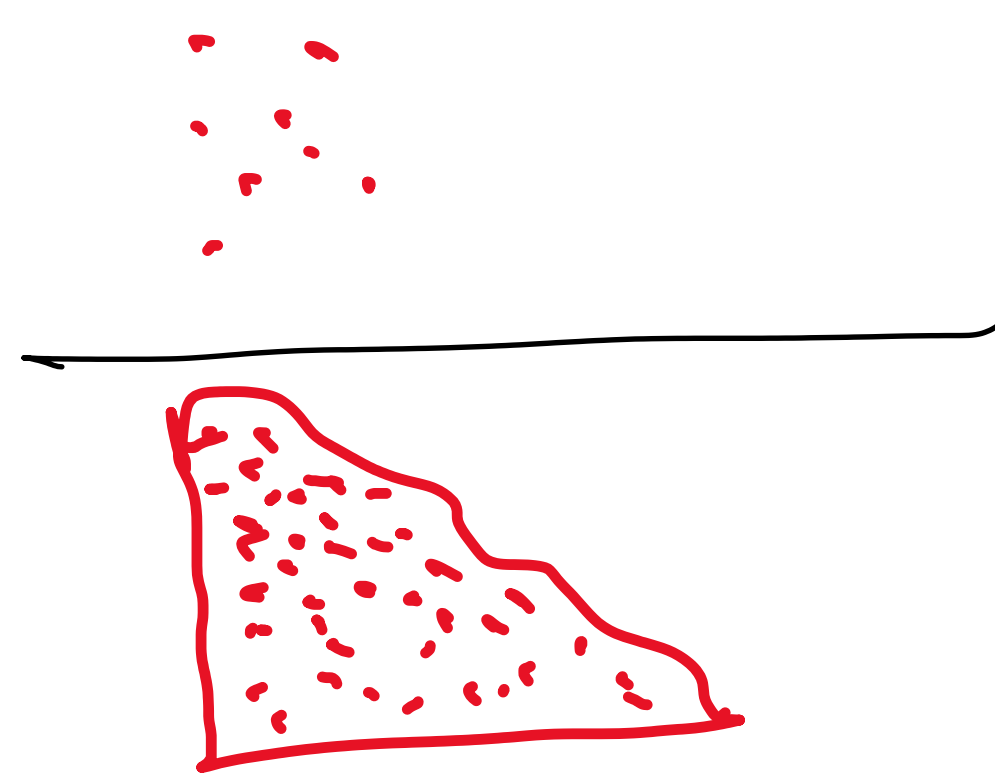
Contextual Recall \Rightarrow



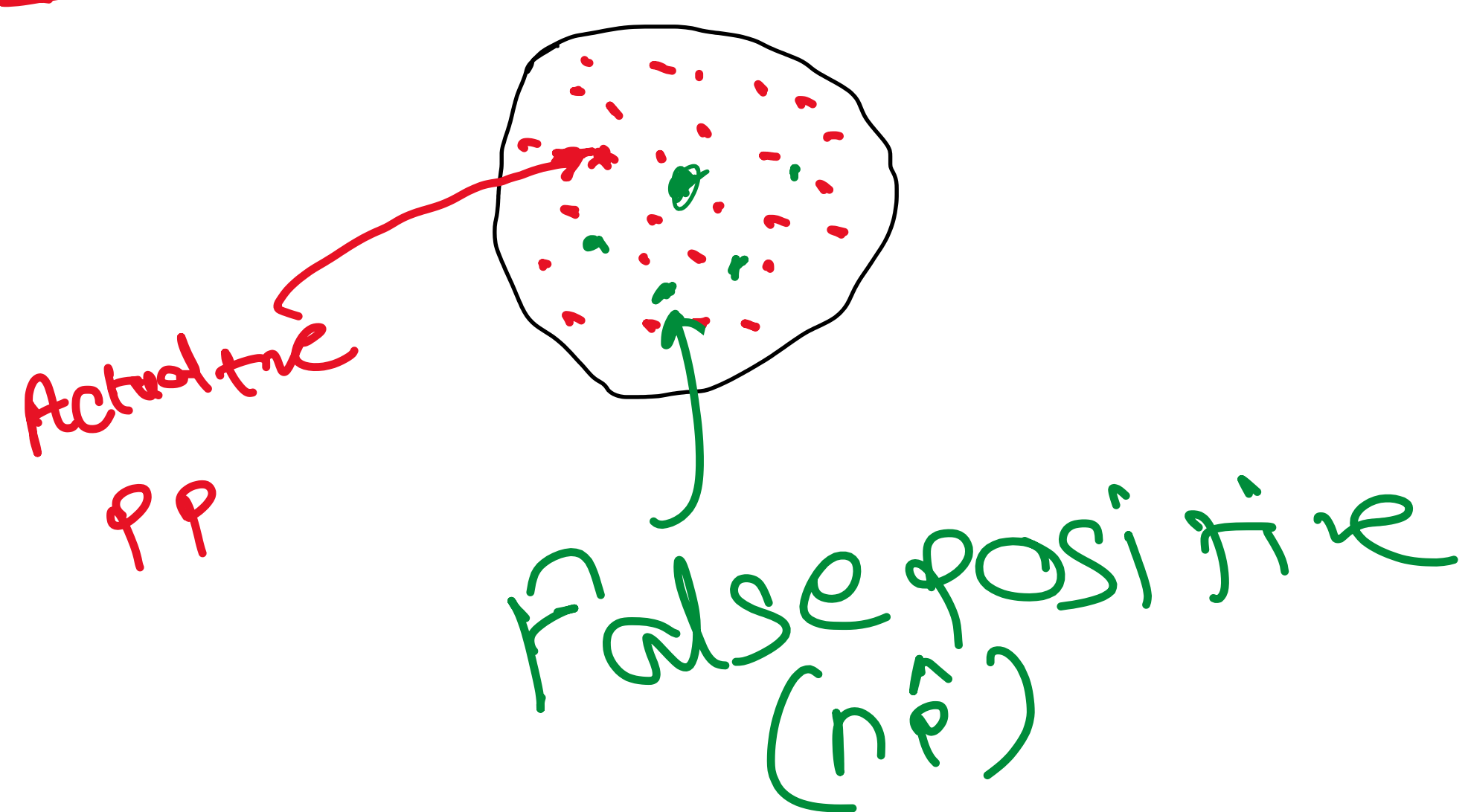
$$\text{Context Recall} = \frac{TP}{TP + FN} = \frac{\hat{P}}{\hat{P} + \hat{N}}$$

where $\rightarrow \hat{P} \rightarrow$ Relevant document Retrieved
 $\hat{N} \rightarrow$ Missed Relevant document.

understanding \Rightarrow Out of Actual Relevant document pool How many Relevant doc you've Retrieved.



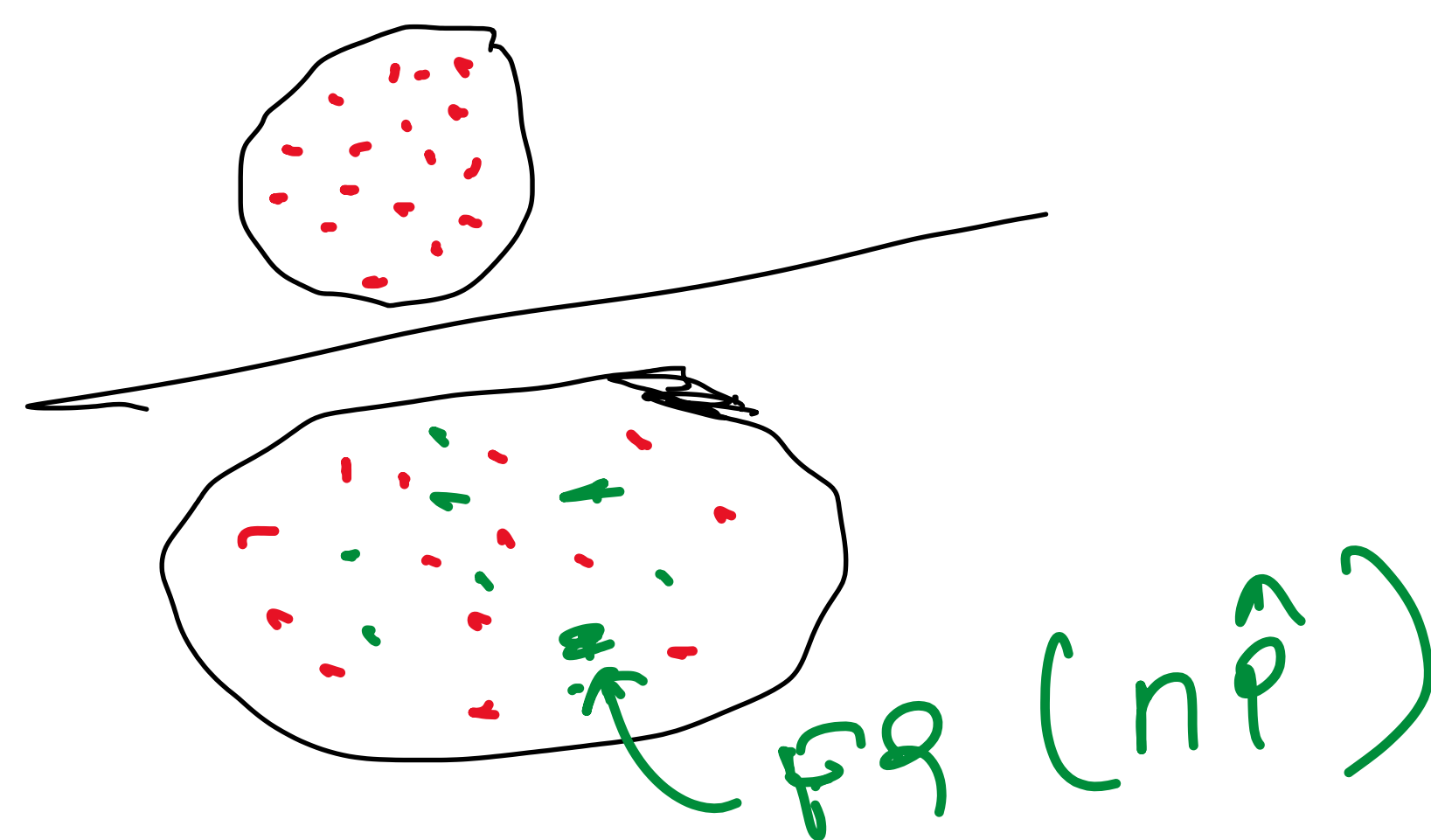
Context precision \Rightarrow



$$\text{Context precision} \Rightarrow \frac{TP}{TP + FP} = \frac{\hat{P}}{\hat{P} + \hat{N}}$$

understanding \Rightarrow

Out of all Retrieved document How many documents are Relevant



Context Relevance \Rightarrow

- ① Are the retrieved documents are relevant to the asked question.

Answer Relevance \Rightarrow

- ① Does the final output is relevant to the asked question?

Groundness \Rightarrow

- ① Does the final output is generated based on provided context.
- ② measures the Hallucination.