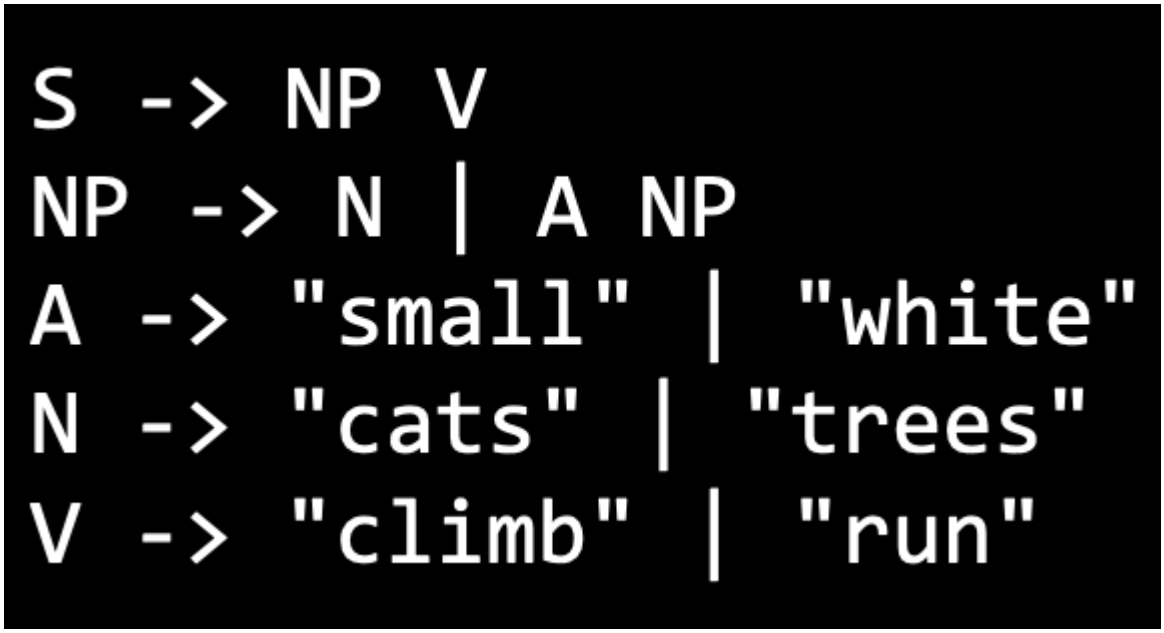
The following question will ask you about the below context-free grammar, where S is the start symbol.




The following question will also ask you about the following four sentences.

Sentence 1: Cats run.
Sentence 2: Cats climb trees.
Sentence 3: Small cats run.
Sentence 4: Small white cats climb.

Of the four sentences above, which sentences can be derived from the above context-free grammar? *1/1

- ○ Only Sentence 1
- ○ Only Sentence 1 and Sentence 2
- ○ Only Sentence 1 and Sentence 3
- ○ Only Sentence 1 and Sentence 4
- ○ Only Sentence 1, Sentence 2, and Sentence 3
- ○ Only Sentence 1, Sentence 2, and Sentence 4
- ◉ Only Sentence 1, Sentence 3, and Sentence 4
- ○ All four sentences
- ○ None of the four sentences

The following question will ask you about a corpus with the following documents.
Document 1: a a b c
Document 2: a c c c d e f
Document 3: a c d d d
Document 4: a d f

What is the tf-idf value for "d" in Document 3? * 1/1

Round answers to two decimal places. Use the natural logarithm (log base e) when taking a logarithm.

- 0.00
- 0.57
- 0.69
- **0.86**
- 2.07
- 3.47
- 6.00

Why is "smoothing" useful when applying Naive Bayes? * 1/1

- Smoothing allows Naive Bayes to be less "naive" by not assuming that evidence is conditionally independent.
- Smoothing allows Naive Bayes to turn a conditional probability of evidence given a category into a probability of a category given evidence.
- Smoothing allows Naive Bayes to better handle cases where there are many categories to classify between, instead of just two.
- **Smoothing allows Naive Bayes to better handle cases where evidence has never appeared for a particular category.**

From the phrase "must be the truth", how many word n-grams of length 2 * 1/1

can be extracted?

- ○ 0
- ○ 1
- ○ 2
- ◉ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 15
- ○ 17

Comments, if any