

Equivalent Σ , F derivations, Phrase Markers, and Reduced Phrase Markers

Σ : S

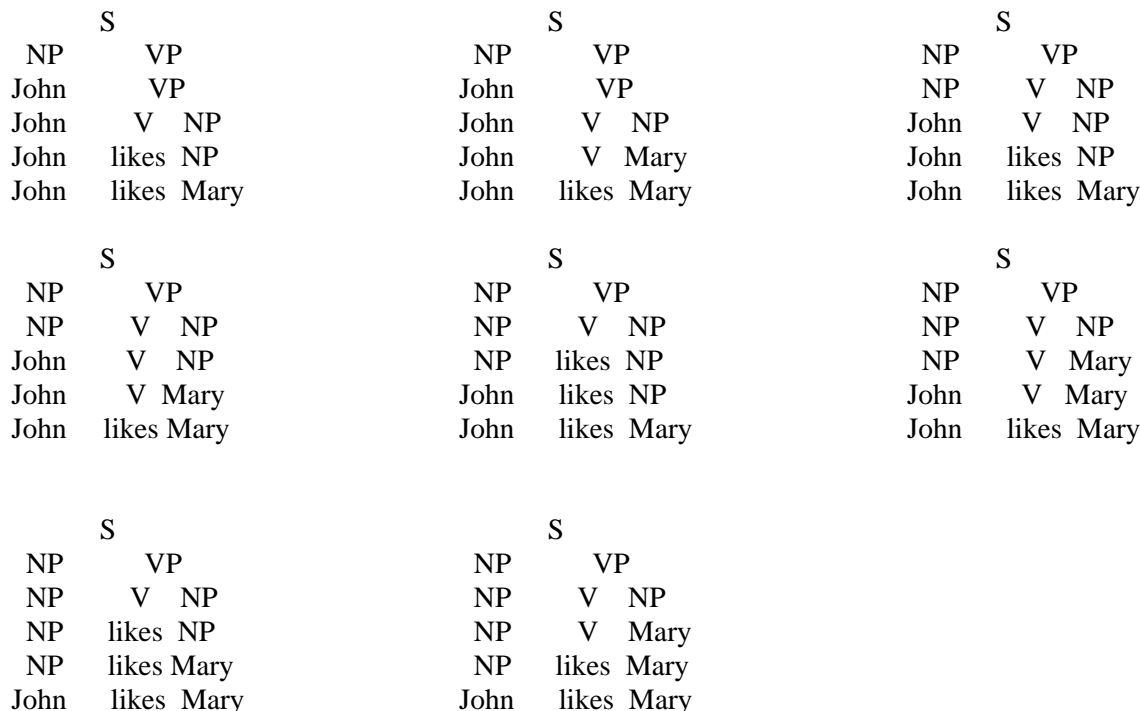
F:

S \rightarrow NP VP VP \rightarrow V NP

NP \rightarrow John V \rightarrow likes

NP \rightarrow Mary

The **equivalent Σ , F** derivations of "John likes Mary", given the above Σ , F grammar:



The **Phrase Marker** of "John likes Mary", given the above Σ , F grammar:

{S, NP VP, NP V NP, NP likes Mary, NP V Mary, NP likes NP, John VP, John V NP, John V Mary, John likes NP, John likes Mary}

[This set consists of all the lines occurring in any of the equivalent derivations of "John likes Mary", given the above Σ , F grammar]

The **Reduced Phrase Marker** of "John likes Mary", given the above Σ , F grammar:

{S, NP likes Mary, John VP, John V Mary, John likes NP, John likes Mary}

[This set is the subset of the Phrase Marker consisting of the terminal string plus all the monostings (the strings containing exactly one non-terminal surrounded by any number of terminal symbols).]

Collapsed derivation tree for "John likes Mary", given the above Σ , F grammar:

