

Grammar Rules

Given the following grammar, use either the top-down or the bottom-up method to determine if each sentence agrees with the grammar. If it does not agree, write *SYNTAX ERROR*.

Grammar Rules

<sentence> ::= <subject><predicate>

<subject> ::= <article><noun> | <noun>

<predicate> ::= <verb><object>

<object> ::= <subject> | <preposition><article><noun>

<article> ::= the | a

<noun> ::= flower | dog | girl | spaceship

<verb> ::= runs | washes | kisses | laughs | flies

<preposition> ::= in | on | at

1. in girl walks on a dog

2. dog runs spaceship

3. flower skates the at flower

4. boy laugh at flower

5. flies in the dog