Questions

Bookmark this page

Reading a Grammar 1

3/3 points (graded)

Consider this grammar:

```
S ::= (B C)* T
B ::= M+ | P B P
C ::= B | E+
```

What are the nonterminals in this grammar? (Note that capitalization and quoting won't give you a clue here, so go by the structure of the grammar alone.)

- [x] B
- [x] C
- [ ] E
- [ ] M
- [ ] P
- [x] S
- [ ] T
- [ ] |
- [ ] *
- [ ] +
- [ ] (
- [ ])

✔

What are the terminals in this grammar?

- [ ] B
- [ ] C
- [x] E
- [x] M
- [x] P
- [ ] S
- [x] T

- [ ] |
- [ ] +
- [ ] *
- [ ] (
- [ ])

✔

Which productions are recursive?

- [ ] S
- [x] B
- [ ] C

✔

Submit

Show Answer

✔ Correct (3/3 points)

Reading a Grammar 2

1/1 point (graded)

Which strings match the root nonterminal of this grammar?

```
root ::= 'a'+ 'b'* 'c'?
```

- [ ] aabcc
- [ ] bbbc
- [x] aaaaaaaa
- [x] abc
- [ ] abab
- [x] aac

✔

Explanation
This grammar matches 1 or more a, followed by 0 or more b, followed by 0 or 1 c. Of the choices above, only the marked ones follow this pattern.

Submit

Show Answer

Answers are displayed within the problem

Reading a Grammar 3

1/1 point (graded)

Which strings match the root nonterminal of this grammar?

```
root   ::= (A B)+
A      ::= [Aa]
B      ::= [Bb]
```

- [ ] aaaBBB
- [x] abababab
- [x] aBAbabAB

- [ ] AbAbAbA

✔

Explanation

aBAbabAB is a match, because (A B)+ does not mean that the same character sequence has to occur one or more times, only that the subpattern (A B) must match one or more times. Each occurrence of (A B) matches independently.
AbAbAbA is missing its final match to B..

Submit

Show Answer

Answers are displayed within the problem

Reading a Grammar 4

1 point possible (graded)

Which strings match the root nonterminal of this grammar?

```
root    ::= integer ('-' integer)+
integer ::= [0-9]+
```

- [ ] 617
- [ ] 617-253
- [ ] 617-253-1000
- [ ] ---
- [ ] integer-integer-integer
- [ ] 5--5
- [ ] 3-6-293-1

Submit

Previous Next