Gradiance Online Accelerated Learning

Zayd

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Help

Submission number:	67759
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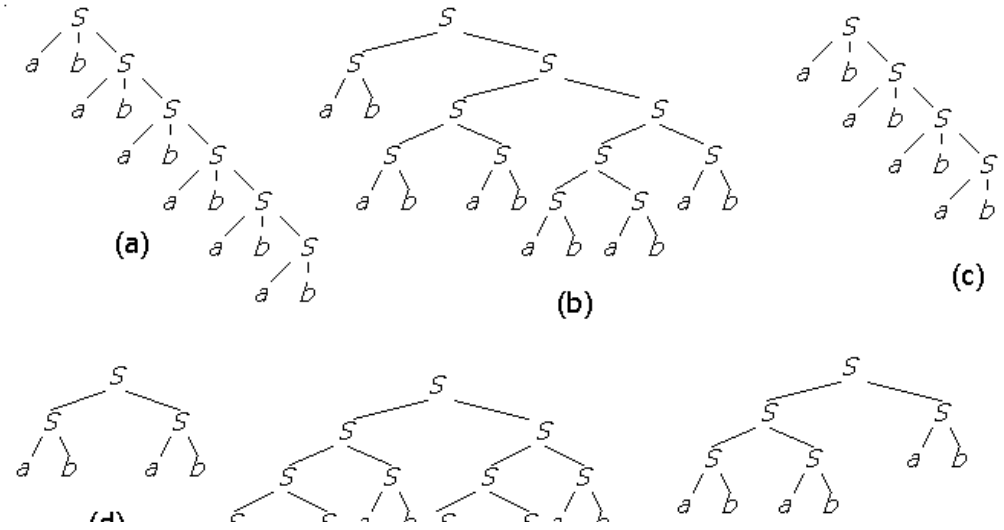
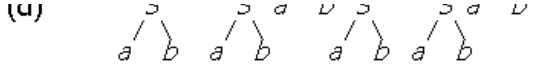
Number of questions:	5
Positive points per question:	3.0
Negative points per question:	1.0
Your score:	11

Selected questions on parse trees. Based on Section 5.2 of HMU.

1. Which of the following is a parse tree for the grammar S → abS, S → ab?





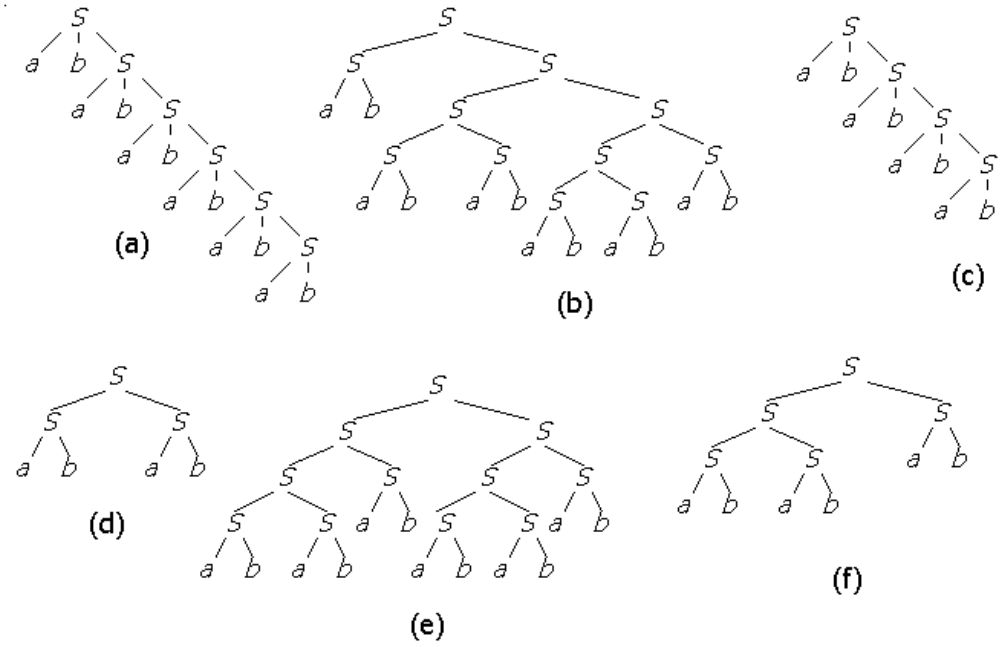
(e) (f)

a) (f)
b) (c)
c) (e)
d) (d)

Answer submitted: **b)**

You have answered the question correctly.

2. Which of the parse trees below yield the same word?



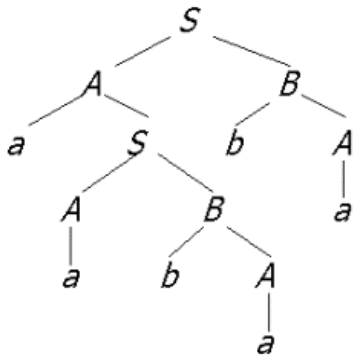
a) c and d
b) a and e
c) a and f
d) a and c

Answer submitted: **b)**

You have answered the question correctly.

3. The parse tree below represents a rightmost derivation according to the grammar

3. The parse tree below represents a rightmost derivation according to the grammar `S → AB, A → aS|a, B → bA`.



Which of the following is a right-sentential form in this derivation?

a) aababA

b) abaAba

c) aAbAba

d) abaAbA

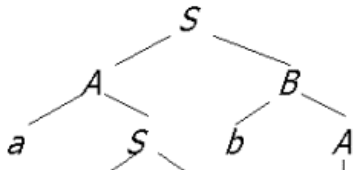
Answer submitted: **b)**

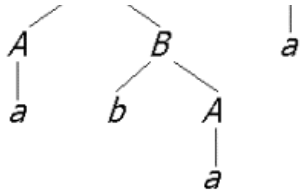
Your answer is incorrect.

This is a sentential form, but does not correspond to the parse tree. One derivation is S => AB => AbA => AbaS => AbaAB => abaAB => abaAbA => abaAba. The derivation of AbaS from AbA requires that the second A, corresponding to the right child of the right child of the root, is replaced by aS. However, in the parse tree, that A is replaced by *a*.

Section 5.2.5 (p. 188) talks about constructing leftmost derivations from parse trees. You should think about how to change that method to produce rightmost derivations instead. Also, see Section 5.1.4 (p. 177) for the definition of rightmost derivations.

4. Here is a parse tree that uses some unknown grammar G.





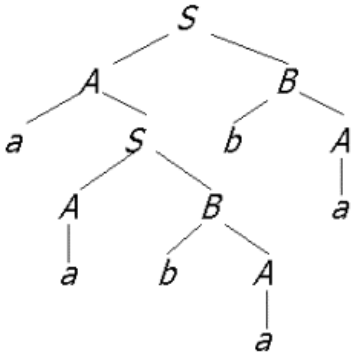
Which of the following productions is surely one of those for grammar G?

a) S → A
b) B → ba
c) S → AB
d) B → b

Answer submitted: **c)**

You have answered the question correctly.

5. The folowing is a parse tree in some unknown grammar G:



Which of the following productions is **definitely not** a production of G?

a) None of the other choices.
b) A → a
c) S → aC
d) A → aS

Answer submitted: **a)**

Answer submitted: a)

You have answered the question correctly.