1. Analyze the following sentences using the following grammar:

(a) $S \rightarrow NP \rightarrow \text{(NP (NP)) (PP)}$
(b) $NP \rightarrow (\text{Det}) \rightarrow (\text{Adj}) \rightarrow N \rightarrow (\text{PP})$
(c) $NP \rightarrow \text{Pron}$
(d) $PP \rightarrow P \rightarrow NP$
(e) $S \rightarrow S^{+} \rightarrow \text{Conj S}$
(f) $NP \rightarrow NP^{+} \rightarrow \text{Conj NP}$
(g) plus all the necessary lexical rules

(a) The monkey ate a banana and a big melon.
(b) The small monkey gave me a banana.
(c) The monkey gave a banana to me.
(d) George saw the big dog of my friend.
(e) The shop is at the corner of the street.
(f) The parents of the groom and the bride. – two analyses
(g) His son sings and her daughter plays the piano.

2. (a) $S \rightarrow NP \rightarrow V \rightarrow (NP (NP)) \rightarrow (PP)$
(b) $NP \rightarrow (\text{Det}) \rightarrow (\text{Adj}) \rightarrow N \rightarrow (\text{PP})$
(c) $PP \rightarrow P \rightarrow NP$

(d) $N \rightarrow \{\text{girl, boy, book}\}$
(e) $V \rightarrow \{\text{sleeps, gives, sees}\}$
(f) $Adj \rightarrow \{\text{small, nice, interesting}\}$
(g) $Det \rightarrow \{a, the\}$
(h) $P \rightarrow \{\text{to, with}\}$

Find:

a. Two sentences that are correct according to both this grammar and grammar of Standard English (GSE). Draw the corresponding syntactic trees.

b. A sentence that is correct according to this grammar, but incorrect according to GSE. Where is the problem?

c. A sentence that is incorrect according to this grammar, but is correct according to the GSE. Where is the problem?