Parsing Practice

Assume this grammar. If you want the most effective practice, I suggest you keep a copy of
the grammar at one spot on your desk and refer to it constantly as you parse, so you can check
each node of your tree to make sure it is legal.

\[
S \rightarrow NP \text{ (Aux)} \ VP
\]
\[
NP \rightarrow \begin{cases} 
\text{Art} \\
\text{NP}
\end{cases} \text{(AP)} \text{ N (PP)}
\]
\[
NP \rightarrow \text{Pronoun}
\]
\[
VP \rightarrow V \text{ (NP)(NP)(PP)(S¯)}
\]
\[
PP \rightarrow P \text{ NP}
\]
\[
AP \rightarrow (\text{Adv}) A
\]
\[
S¯ \rightarrow (\text{Comp}) S
\]

Parse these sentences and phrases, giving two parses if two meanings are indicated.
Answers on the remainder of this handout.

1. She sang the song on the table. (2)
   a. She stood on the table while she sang.
   b. The music for the song was sitting on the table.

2. Fred and Bill or Sue (2)
   a. Either the group consisting of Bill and Fred, or else Sue.
   b. Bill, plus one of Fred or Sue.

3. The mighty ship sinks (2)
   a. The ship which is very large and powerful sinks to the bottom of the ocean.
   b. The people who are mighty put sinks in trucks and send them off to their destinations.

4. Bill’s very distant relative’s pets (1)

5. We ship books and keys to the city. (2)
   a. The destination of the books and keys that we ship is the city.
   b. We ship two things: books, and keys to the city (the latter are bought by our customers for civic
      awards ceremonies).

6. We xeroxed and studied the readings (2)
   a. There were two things that we did with the readings: we Xeroxed them and we studied them.
   b. We did two things: some Xeroxing, and some studying of the readings.
7. You might notice ashes and smoke. (2)
   a. The forest fire is producing ashes and smoke and you might notice them.
   b. You might notice cigarette ashes all over your beautiful linen suit and, nervous that they will wreck your job interview, light up another cigarette.

8. We threw it across the field and into the bushes. (1)

9. a very tall and slightly bald man (1)

10. Jack says that soup is for him. (2)
    a. Jack says that that particular bowl of soup over there is for him.
    b. Jack says that soup, as a generic food item, is just the thing for him.

11. He served toast and mixed salad. (2)
    a. He did two things: serve toast and mix salad.
    b. He served a combination of toast and mixed salad.

12. We offered the timid encouragement. (2)
    a. We offered encouragement to the timid.
    b. We offered the encouragement that was timid.

13. They served meatballs and macaroni and cheese. (2)
    a. They served meatballs, and also the dish known as macaroni and cheese.
    b. The served an odd dish called meatballs and macaroni, as well as cheese.


15. We loaned her money.
    a. We loaned money to her.
    b. We loaned the money she has (to someone).

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1 There is a third meaning, but to get this one you need better phrase structure rules.
Answers

1. *She sang the song on the table.* (2)

   a. She stood on the table while she sang.

   b. The music for the song was sitting on the table.
2. Fred and Bill or Sue (2)
   
a. Either the group consisting of Bill and Fred, or else Sue.

```
NP
   /NP         Conj         NP
   /NP          /NP           /NP
   /NP      and            /NP or /N
    Bill      Sue
   Fred
```

b. Bill, plus one of Fred or Sue.

```
NP
   /NP         Conj         NP
   /NP          /NP           /NP
   /NP      and            /NP or /N
    Bill      N            N
        Fred       Sue
```

3. The mighty ship sinks (2)
   
a. The ship which is very large and powerful sinks to the bottom of the ocean.

```
S
   /NP       VP
   /NP     
   /Art     V
        /AP   N
         The    ship sinks
         mighty
```
The people who are mighty put sinks in trucks and send them off to their destinations.

4. Bill’s very distant relative’s pets (1)

5. We ship books and keys to the city. (2)

a. The destination of the books and keys that we ship is the city.
b. We ship two things: books, and keys to the city (the latter are bought by our customers for civic awards ceremonies).

6. We Xeroxed and studied the readings (2)

   a. There were two things that we did with the readings: we Xeroxed them and we studied them.
b. We did two things: some Xeroxing, and some studying of the readings.

```
S
   / \   
NP   VP
   |   |
Pro VP Conj VP
   |   |   |   |
We V and V NP
   |   |   |
Xeroxed studied Art N
   |   |
   the readings
```

7. You might notice ashes and smoke. (2)

a. The forest fire is producing ashes and smoke and you might notice them.

```
S
   / \   
NP Aux VP
   |   |   |
Pro might V NP
   |   |   |
You notice NP Conj NP
   |   |   |
   N and N
   ashes smoke
```
b. You might notice cigarette ashes all over your beautiful linen suit and, nervous that they will wreck your job interview, light up another cigarette.

\[
\text{S} \\
\text{NP} \quad \text{Aux} \quad \text{VP} \\
\text{Pro} \quad \text{might} \quad \text{VP} \quad \text{Conj} \quad \text{VP} \\
\text{You} \quad \text{V} \quad \text{NP} \quad \text{and} \quad \text{N} \\
\text{notice} \quad \text{N} \quad \text{smoke} \\
\text{ashes}
\]

8. *We threw it across the field and into the bushes.* (1)
9. a very tall and slightly bald man

10. Jack says that soup is for him. (2)
    a. Jack says that that particular bowl of soup over there is for him.
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12. We offered the timid encouragement.

a. We offered encouragement to the timid.

b. We offered the encouragement that was timid.
13. They served meatballs and macaroni and cheese.\(^2\)

a. They served meatballs, and also the dish known as macaroni and cheese.

b. The served an odd dish called meatballs and macaroni, as well as cheese.

\(^2\) Note: there are really three readings, but one of them cannot be gotten with the phrase structure rules of (102) in the text. You will please your TA if you point out this third reading and why it is impossible.
Note: later in the course we add the phrase structure rule $NP \rightarrow NP (\text{Conj} \ NP)^*$. With this rule, there is a third reading, “They served three things: meatballs, macaroni, and cheese.”


15. We loaned her money.

a. We loaned money to her.

b. We loaned the money she has (to someone).