Amoh Sachdera Date Date Page No.	
Class Assignment PCF Gr	
Sentence: 9 saw a man with the telescope	
lexicons:	(
$N \rightarrow dog (0.3)$	(0.25) (0.75)
J → ate (0.4) Pronoun → I (0.5) Proposition → with J → cried (0.2) Pronoun → he (0.5) Proposition → under J → Saw (0.4)	(0.9)
Productions,	
$S \rightarrow VP NP \qquad (0.4)$ $S \rightarrow NP VP \qquad (0.6)$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
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NP -> Pronoun 0.1	
NP -> Det Hour 0.32 NP -> Det Adj Nour 0.2	
NP -> NP PP 0.1	
PP → Preposition NP	

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	Bottom Up Parsing Table	
	Dalley the Land	
		Action
Strete	Input	/1WC 02.
5	I Saw a man into a Tules whe	shift
\$1	Saw a home with a Leuscope	Rodine (Px -> i)
\$ Pronum	sus a man with the tell whe s	Reduce (NP-) Po)
\$49	sur a man with the teles whe -	shift
\$NP San	a man with the telescope. I	Reduce (V - Saw)
Sup V	a man with the telescope \$	shift
349 Va	man with the telescope &	shift
SUP V Det	man with the telescope &	Shift
Jul 1 bot	man with the telescope \$	Reduce (N-> man)
	N with the telescope \$	Reduce (MP -> Dot)
\$NP Y NP	with the telescope \$	Shift (a inth)
\$ 108 V NP	, , , , , , , , , , , , , , , , , , ,	Reduce (Pr -> with)
\$ NP U NP	By the telescope \$	Shift
\$ NP V NP	esepth the tellscope \$	Reduce (N > +elswpe)
	Freh out teloscope \$	Reduce (N = telescope)
	Prep Det telescope \$	Reduce (NP -> Det N)
	Prep Ret N \$	Reduce (#P -> Pup. NP)
FUP V PP	,	Reduce (NP - NP PP)
\$ 4P V NP	P P	Palma / VP -> VAPI
\$NP VP	\$	Reduce (S>NPVP)
\$ \$	*	Acrept
	7	1 Myss
1		conned with ComCoonner

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The parse Tree is as follows:-
Journs .
S
NP VP
Pronoun V NP
I Saw NP PP
Dot NP
Ret N MAR 101
a man with Det N
the telescope
D
Derivation:
S=> PP VP => Borrown VP => I VP => I V NP
=> I Saw NP PP => I saw Ret NP PP => I saw a NPP
=> I saw-a mon PP => I saw a man Prepo sition NP
DOK N => T SON A DOK I'M HE TO N =>
Sown man with the the supre
amen with our with

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	The sword parse the Will be:
	S
	NP VP
	Promoun V NP PP
	I Saw pet N preparation NP
	a man with Pet N
	(H + -+ 1 , 1
	the telscope
• 2	Perivation For Jewond Tale:
	S => UP > Promum VP => i VP => i V NP PP -> ; Saw NP
	IP > I SOW RUE N PP > I SOW & N PP -> T COUL OF
	Then IP I I am a wan hours withoution NP -> I saw a man
	with 19 = 3 + 5 and a man with hat hip
	the N => I saw a man with the telescope.
	Probability of First The
•	TIME THE
	S => NB NB (0.6)
	NP => Pronoun (0.1)
	130mpm => T (0.5)
	$V \Rightarrow V P (0.3)$
	$V \Rightarrow SMM \Leftrightarrow V \Leftrightarrow$
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	NP => NP PP (0.1)
	$NP \Rightarrow Qet N \qquad (0.2)$
	Ret $\Rightarrow \alpha$ (0.6)
	$N \Rightarrow man$ (0.4)
	PP => Prup NP (1)
	Prop = with (0.9)
	NP => Det N (0-2)
	Ret > the (0-4)
	N => Telesophe (0.02)
	Probability = Tipi = 2.488 + 10-8
	·
	Prosability For Second Tree:-
	J=> NP JP (0.6)
	NP => Brown (0.1)
	Promiss => I (0-5)
	UP => V NP PP (0.13)
	V -> Sam (0.4)
	$NP \Rightarrow Det N \qquad (0.2)$
	PP => Proposition NP (1)
	$20t \Rightarrow a \qquad (0.6)$
) => man (0.4)
	elposition = with (0.9)
1.	$yP \Rightarrow Qet N$ (0.2)
	Det => the (0.4)
	N => Thyrope (0.02)
	0
	Probability P2 = 11pi2 = 1.244 x10-7
	A. II a la l
	As the second tree has a higher probability P_>P.
	the second derivation is much more likely to occur.
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