

2. a).

Stack	Buffer	New dependency	Transition
[ROOT]	[I, parsed, this, sentence, correctly]		Initial Configuration
[ROOT, I]	[parsed, this, sentence, correctly]		shift
[ROOT, I, parsed]	[this, sentence, correctly]		shift
[ROOT, parsed]	[this, sentence, correctly]	parsed → I	Left-Arc
[ROOT, parsed, this]	[sentence, correctly]		shift
[ROOT, parsed, this, sentence]	[correctly]		shift
[ROOT, parse, sentence]	[correctly]	sentence → this	Left-Arc
[ROOT, parse]	[correctly]	parsed → sentence	Right-Arc
[ROOT, parse, correctly]			shift
[ROOT, parse]		parsed → correctly	Right-Arc
[ROOT]		ROOT → parse	Right-Arc

b). $2n$, because each word would need a shift and transition step.