

# LaTeX Homework

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## 1 Section 1

1. Neurology (brain possibilities).
2. Phonology in general.
3. Somnology (about dreaming in general, includes lucid dreaming).

## 2 Section 2

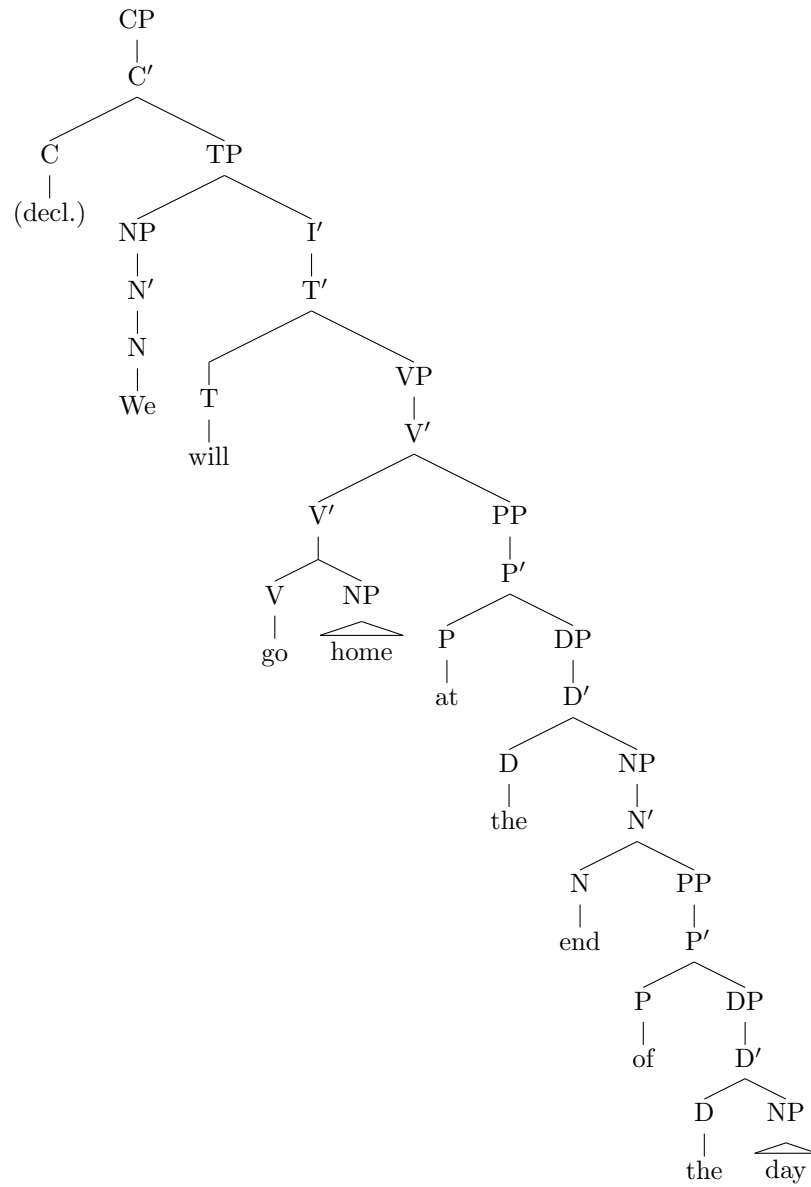
English.

/aɪm ən 'ɔːlməʊst 'twenti fɑːv jɪə əʊld 'stjuːdənt əv 'ɪŋɡlɪʃ frɪ'ləʊəŋtʃi || maɪ  
,speʃəlaɪ'zeɪʃən ɪz 'nætʃərəl 'læŋɡwɪdʒ 'prəʊsesɪŋ || aɪm ɪn ðə 'mɪdl əv maɪ ,sekənddrɪ'griː  
| ənd maɪ 'ɪntrəsts ɑː | 'lɜːnɪŋ ,dʒæpən'ɪz | dɑːnsɪŋ dʒæz | ənd 'fɪɡə ,skɜːtɪŋ wɪf  
m'kluːdz | ɒn aɪs ,skɜːtɪŋ | 'fɪɡə 'rəʊləskɜːtɪŋ | ənd ɒf aɪs 'eksəsaɪzɪz/

Polski.

/ˈjestəm dvudʒestɔfˈtɛrɔˈlɛtɲɔ stuˈdɛntkɔ fɪlɔˈlɔɡʲi ɔŋˈɡʲɛlskʲɛj | na spɛtsjalʲiˈzatsʲi  
pʃɛtfaʒaˈnʲɛ jɛwˈzɪka natʊrəlˈnɛɡɔ || mɔˈjɪmi zɑɪntɛrɛsɔvɑˈnʲɑmi ˈsɔ | naˈukɑ jɛˈzɪkɑ  
jɑpɔʃˈskʲɛɡɔ | tɔʃˈtʃɛnʲɛ ˈdʒɛzʊ ɔrɑs ˈjɑzdɑ fɪɡʊˈrɔvɑ | ˈktʊrɑ ɔbɛjˈmuʲɛ ˈjɑzdɛ na  
ˈwɪʒvɑx | ˈjɑzdɛ na wɪʒvɔˈrɔlkɑx fɪɡʊˈrɔvɪx | ɔrɑs ɪmɪˈtʲatsʲɛ | ˈtʃɪlɪ tɛfɪˈtʃɛnʲɑ pɔzɑ  
ˈlɔdɛm/

### 3 Section 3



## 4 Section 4

Rule 1: Spirantization

$$\left[ \begin{array}{c} +\text{stop} \\ -\text{voice} \end{array} \right] \rightarrow \left[ \begin{array}{c} -\text{stop} \\ +\text{voice} \\ +\text{fricative} \end{array} \right] / \left[ +\text{vowel} \right] \_\_\left[ +\text{vowel} \right]$$

*A voiceless stop is realized as the corresponding voiced fricative when surrounded by vowels.*

Rule 2: Vowel Nasalization

$$\left[ +\text{vowel} \right] \rightarrow \left[ +\text{nasal} \right] / \_\_\left[ +\text{nasal} \right]$$

*A vowel is realized as nasalized when it precedes a nasal consonant.*

Rule 3: Kongo Palatalization

$$\left[ \begin{array}{c} +\text{coronal} \\ -\text{sonorant} \end{array} \right] \rightarrow \left[ \begin{array}{c} +\text{delayed release} \\ -\text{anterior} \\ +\text{distributed} \\ +\text{strident} \end{array} \right] / \_\_\text{i}$$

## 5 Section 5

This linguistic equation is taken from András Kornai's *Mathematical linguistics* (2008) page 36 (47 in the pdf file).

3.3

$$f(n+1, k+1) = \sum_{i=1}^{k+1} f(n, i)2^{k+1-i} + f(n, k+1)$$

## 6 Section 6



羽生・結弦（1994年12月7日－ ） /hanʲuɾu jɯɾʑuɾu/

羽生・結弦は、宮城県仙台市泉区出身のフィギュアスケート選手（男子シングル）。主要な戦績として、2014年ソチオリンピック・2018年平昌オリンピック2大会連続優勝（男子シングル種目で66年ぶりの2連覇）。つまり、結弦さんはオリンピックの金メダルを二枚勝ちました。



最後の写真は今年のファンタジーオンアイス出演から。羽生・結弦さんは私と同じ年に生まれました。彼は私を動かします。

Yuzuru Hanyu is a figure skater (in single men category) from Izumiku, Sendai, Miyagi Prefecture, Japan. His major achievements(results) are, among others, (after a 66-year break for Japan) 2 consecutive victories in the 2014 Sochi Olympic Winter Games and the 2018 PyeongChang Olympic Winter Games.

In other words, Yuzuru won (consecutively) 2 Olympic gold medals.

The last picture is from the 2019 Fantasy on Ice performance. Yuzuru Hanyu was born the same year as I. He inspires me.

