

## PRACTICE WITH PHONOLOGICAL RULES

1.
  - a. All intervocalic voiceless stops become voiced.
  - b. Voiceless stops become voiced when intervocalic.
  - c. 
$$\left[ \begin{array}{l} +\text{STOP} \\ -\text{VOICED} \end{array} \right] \rightarrow \left[ \begin{array}{l} +\text{STOP} \\ +\text{VOICED} \end{array} \right] / \text{V} \underline{\hspace{2cm}} \text{V}$$
  - d. 
$$\left[ \begin{array}{l} -\text{CONTINUANT} \\ -\text{NASAL} \\ -\text{VOICED} \end{array} \right] \rightarrow \left[ \begin{array}{l} -\text{CONTINUANT} \\ -\text{NASAL} \\ +\text{VOICED} \end{array} \right] / \text{V} \underline{\hspace{2cm}} \text{V}$$
  - e. 
$$[-\text{VOICED}] \rightarrow [+ \text{VOICED}] / \text{V} \left[ \begin{array}{l} \overline{-\text{CONTINUANT}} \\ -\text{NASAL} \end{array} \right] \text{V}$$
  
2.
  - a. Nontense vowels in the final syllable of a word are stressed when they are followed by two or more consonants.
  - b. Nontense vowels become stressed when followed by two or more consonants in the final syllable of a word.
  - c. 
$$[-\text{TENSE}] \quad \div \quad [+ \text{STRESS}] \quad / \quad \underline{\hspace{2cm}} \quad \# \text{C}_2^n$$
  
3.
  - a. Delete all final consonants when the following word begins with a consonant.
  - b. Consonants become zero when final and when the following word begins with a consonant.
  - c. 
$$\text{C} \quad \div \quad \emptyset \quad / \quad \underline{\hspace{2cm}} \quad \text{C} \#$$
  
4.
  - a. Reduce all unstressed vowels to schwa.
  - b. Unstressed vowels become schwa.
  - c. 
$$[-\text{STRESS}] \quad \div \quad [\text{ə}]$$

5. a. Palatalize all alveolar stops before [y].

b. Alveolar stops become palatal before [y].

c.  $\left[ \begin{array}{l} +\text{STOP} \\ +\text{ALVEOLAR} \end{array} \right] \rightarrow \left[ \begin{array}{l} +\text{STOP} \\ +\text{PALATAL} \end{array} \right] / \text{_____} [\text{y}]$

d.  $\left[ \begin{array}{l} -\text{CONTINUANT} \\ -\text{NASAL} \\ +\text{CORONAL} \\ +\text{ANTERIOR} \end{array} \right] \rightarrow \left[ \begin{array}{l} -\text{CONTINUANT} \\ -\text{NASAL} \\ +\text{CORONAL} \\ -\text{ANTERIOR} \end{array} \right] / \text{_____} [\text{y}]$

e.  $[\text{+ANTERIOR}] \rightarrow [\text{-ANTERIOR}] / \left[ \begin{array}{l} \overline{-\text{CONTINUANT}} \\ -\text{NASAL} \\ +\text{CORONAL} \end{array} \right] [\text{y}]$

6. a. Devoice all final fricatives.

b. Fricatives become voiceless when final (before #).

c.  $\left[ \begin{array}{l} +\text{FRICATIVE} \\ +\text{VOICED} \end{array} \right] \rightarrow \left[ \begin{array}{l} +\text{FRICATIVE} \\ -\text{VOICED} \end{array} \right] / \text{_____} \#$

d.  $\left[ \begin{array}{l} -\text{SONORANT} \\ +\text{CONTINUANT} \\ +\text{VOICED} \end{array} \right] \rightarrow \left[ \begin{array}{l} -\text{SONORANT} \\ +\text{CONTINUANT} \\ -\text{VOICED} \end{array} \right] / \text{_____} \#$

e.  $[\text{+VOICED}] \rightarrow [\text{-VOICED}] / \left[ \begin{array}{l} \overline{-\text{SONORANT}} \\ +\text{CONTINUANT} \end{array} \right] \#$

7. a. Aspirate all initial voiceless stops.

b. Voiceless stops become aspirate when initial (after #).

$$c. \begin{bmatrix} +\text{STOP} \\ -\text{VOICED} \\ -\text{ASPIRATE} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{STOP} \\ -\text{VOICED} \\ +\text{ASPIRATE} \end{bmatrix} / \# \underline{\hspace{2cm}}$$

$$d. \begin{bmatrix} -\text{CONTINUANT} \\ -\text{NASAL} \\ -\text{VOICED} \\ -\text{ASPIRATE} \end{bmatrix} \rightarrow \begin{bmatrix} -\text{CONTINUANT} \\ -\text{NASAL} \\ -\text{VOICED} \\ +\text{ASPIRATE} \end{bmatrix} / \# \underline{\hspace{2cm}}$$

$$e. [-\text{ASPIRATE}] \rightarrow [+ \text{ASPIRATE}] / \# \begin{bmatrix} \overline{-\text{CONTINUANT}} \\ -\text{NASAL} \\ -\text{VOICED} \end{bmatrix}$$

8. a. Nasalize all vowels before a nasal consonant.

b. Vowels become nasal before nasal consonants.

$$c. V \quad \div \quad [+ \text{NASAL}] \quad / \quad \underline{\hspace{2cm}} \quad [C, + \text{NASAL}]$$

9. a. A lax vowel in the antepenultimate syllable of a word is stressed.

b. Nontense vowels become stressed in antepenultimate syllables.

$$c. [-\text{TENSE}] \quad \div \quad [+ \text{STRESS}] \quad / \quad \underline{\hspace{2cm}} \quad C_0^n V C_0^n V C_0^n \#$$

