Quiz 3: Language Acquisition

1. What is word learning?
   (a) the segmentation of speech into words
   (b) pairing sounds with meaning (e.g., objects, events)
   (c) learning the meanings of words
   (d) learning syntactic categories

2. Given the following co-occurrence matrix. What is \( P(s|a) \)?

\[
\begin{array}{c|cccc}
   & e & a & s & m \\
\hline
   s & 3 & 2 & 0 & 3 \\
a & 2 & 0 & 4 & 0 \\
i & 0 & 1 & 2 & 2
\end{array}
\]

   (a) \( P(s|a) = \frac{1}{4} \)
   (b) \( P(s|a) = \frac{2}{3} \)
   (c) \( P(s|a) = \frac{2}{5} \)
   (d) \( P(s|a) = \frac{2}{9} \)

3. In the development of language what follows babbling?
   (a) two-word utterances
   (b) laughter
   (c) single-word utterances
   (d) telegraphic speech

4. What did the Saffran et al. (1996) experiments show?
   (a) Infants can segment speech
   (b) In order to acquire a lexicon infants are sensitive transitional probability cues
   (c) That transitional probability is a good model of speech segmentation
   (d) Infants can segment trisyllabic words

5. Consider the following speech input:

\[
\begin{array}{c}
   \text{doyouseethekitty} \\
   \text{see} \\
   \text{kitty} \\
   \text{doyoulikethekitty}
\end{array}
\]

Which of the following segmentations would yield the smallest lexicon?

   (a) insert a segmentation boundary after every letter
   (b) insert segmentation boundaries after “doyou”, “see”, “thekitty”, and “like”
   (c) insert a segmentation boundary at the end of each utterance
   (d) insert segmentation boundaries randomly
6. What are meaning underextensions?
   (a) Kids use a specific word to mean many many things
   (b) Kids use verbs instead of nouns
   (c) Kids use a general word to mean a very specific thing
   (d) Kids have incomplete definitions for the meaning of words

7. Which of the following is not an internal assumption helping children to learn what words mean:
   (a) Whole Object Assumption
   (b) Syntactic Bootstrapping
   (c) Taxonomic Assumption
   (d) Mutual Exclusivity

8. In the following sketch of the agglomerative clustering algorithm, which line is wrong:

   1. Place each data point into its own singleton group
   2. Repeat: iteratively merge the two random groups
   3. Until: all the data are merged into a single cluster

   (a) line 1 is wrong
   (b) line 2 is wrong
   (c) line 3 is wrong

9. What is the maximum number of clusters the following dendrogram corresponds to?
   (a) three clusters
   (b) two clusters
   (c) one cluster
   (d) five clusters