Quiz 3: Language Acquisition

1. What is word learning?
   (b) pairing sounds with meaning (e.g., objects, events) [69.8% correct]

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

<table>
<thead>
<tr>
<th>e</th>
<th>a</th>
<th>s</th>
<th>m</th>
</tr>
</thead>
</table>
   s | 3 | 2 | 0 | 3 |
   a | 2 | 0 | 4 | 0 |
   i | 0 | 1 | 2 | 2 |

   (b) $P(s|a) = \frac{P(a,s)}{P(a)} \approx \frac{f(a,s)}{f(a)} = \frac{6}{9} = \frac{2}{3}$ [71.7% correct]

3. In the development of language what follows babbling?
   (c) single-word utterances [83.0% correct]

4. What did the Saffran et al. (1996) experiments show?
   (b) In order to acquire a lexicon infants are sensitive transitional probability cues [52.8% correct]

5. Consider the following speech input:

   Input: doyouseethekitty seethekitty doyoulikethekitty

Which of the following segmentations would yield the smallest lexicon?
(c) insert a segmentation boundary at the end of each utterance, i.e., a boundary after doyouseethekitty, seethekitty, and doyoulikethekitty. [30.2%]

6. What are meaning underextensions?
   (c) Kids use a general word to mean a very specific thing [75.5%]

7. Which of the following is not an internal assumption helping children to learn what words mean:
   (b) Syntactic Bootstrapping [22.6% correct]

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

   (b) line 2 is wrong [92.5% correct]

   The algorithm does not merge cluster groups randomly; instead it merges the two closest groups according to some predefined measure of inter-group similarity.

9. What is the maximum number of clusters the following dendrogram corresponds to?
The maximum number of clusters the dendrogram corresponds to is five, the minimum is two.