1. In class, we discussed why Find-S will be consistent with any new negative example, provided the target concept is in the hypothesis space. Show that Find-S need not be consistent with a new negative example if the target concept is not in the training set. Illustrate your answer by giving a target concept and a training data set. Use the attributes and values as given in Table 2.2 of the text and conjunctive hypothesis as discussed in section 2.2 of the text.

2. Consider the situation where there are two attributes $A$ and $B$, with $a_1$ and $a_2$ being the only possible values for $A$, and $b_1$ and $b_2$ being the only possible values for $B$. Let the hypothesis space be conjunctive hypothesis for this set of attributes and values. Give an example of a target concept and a training data such that the candidate elimination algorithm will not be able to come up with any hypothesis consistent with the training data. Show the G and S boundaries after each example in your training data.

3. Exercise 2.4, parts a and b from the text.

4. Exercise 2.5, parts a and b from the text.