## 1. Exercise 2.8

(a) We know that  $\overline{g}$  is the average function of many different hypothesis  $g_1, g_2, ..., g_n$  of different data sets. H represents the hypothesis set, where each hypothesis in H is dependent on their respective data set. If the hypothesis in H are in linear combination, then the average of the hypothesis in H should also be a linear combination, proving that  $\overline{g} \in H$ 

(b)