1. A student proposed a collection of features to build a detection engine based on statistical classifier. Based on collected and labeled data, the CDF distributions for two features (f1 and f2) are presented in Figure 1 and Figure2, respectively (in the attached document). What feature is better for the detection? Please justify your answer. (5 Points)
2. In the IPv4 network, Wright State University is responsible for a /16 network block that contains 2^16 IP addresses. Somebody in a certain place in this Internet triggers a DDoS attack against the [www.cnn.com](http://www.cnn.com) website, where the source IP address for each TCP SYN packet is randomly generated. This attack has caused totally ***W*** TCP SYN packets.

**Question**: how many SYNACK packets caused by this DDoS attack should be observed by Wright State University network? (5 Points)