Practice Quiz 01

1. What does it mean for a language to be \{recognizable, decidable\}? 

2. Suppose $L_1$ and $L_2$ are both \{recognizable, decidable\} languages. Argue that $\{L_1 \cup L_2, L_1 \cap L_2, \bar{L}_1\}$ \{is, is not\} \{recognizable, decidable\}.

3. Give a diagram representing a Turing machine which solves the following problem.