1. You have already proved this statement, but please prove it once again, this time using properties of recursive and r.e. languages: If $S$ is a finite set of recursively enumerable languages that partition $\Sigma^*$, then every $L \in S$ is recursive.

2. In decimal, what is the index of the string 0011?

3. What is $w_{17}$?

4. In decimal, what is the index of the Turing machine 111111?

5. Give an encoding of a Turing machine that recognizes $(0 + 11)0^*$.

6. In binary, what is the smallest $i$ such that $L(M_i)$ is infinite?

7. In binary, what is the smallest $i$ such that $L(M_i) = \emptyset$?

8. In binary, what is the smallest $i$ such that $L(M_i) = \{\lambda\}$?

9. In binary, what is the smallest $i$ such that $L(M_i) = \Sigma^*$?

10. What is the first string in $\overline{L_d}$?