Worksheet5

1. Prove that if you have denumerably many pairwise disjoint sets A_n , all of which are denumerable, their union $\cup_n A_n = \{x | x \in A_n \text{ for some } x \in Z^+\}$ is also denumerable.

2. Suppose A is a set. Prove that $|A| < |P(A)|$

3. Compute the unit digit of $43^{43^{43}}$