An experiment consists of flipping a dime, a nickel, and a penny one time each.

(a) Give the sample space $S$ for the experiment.

(b) Let $A$ be the event that the dime comes up heads. Let $B$ be the event that both the nickel and the penny come up tails. Find $P(A)$ and $P(B)$.

(c) Find $P(A \text{ and } B)$. Are $A$ and $B$ independent? Are they disjoint?

(d) Find $P(A \text{ or } B)$. 