

The majority of the credit you receive will be based on the completeness and the clarity of your responses. **Show all of your work and justify your solutions as much as possible.**
This is a 15 minute quiz and has 2 questions, for a total of 10 points

(5 points) 1. Let A be any set. Determine $\emptyset \cap A$ and $\emptyset \cup A$.

(5 points) 2. Given the set $A = \{x \mid x = 0 \text{ or } x \in \mathcal{P}(\{0\})\}$, determine the elements of A and $\mathcal{P}(A)$. Give your final answer using set notation.