

Write your name and code on the back.

1. { 6 points } Determine whether each of these statements is true or false.

Check the appropriate box:

(a) $\emptyset \in \{\emptyset\}$ True
 False

(b) $\emptyset \subset \{0\}$ True
 False

(c) $0 \subseteq \{0\}$ True
 False

2. { 4 points } Let A and B be sets. Prove that

$$A \cap B = B \cap A$$