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Suppose that R and S are reflexive relations on a set A.

Prove or disprove each of these statements.

- (a) $R \cup S$ is reflexive.
- **(b)** $R \cap S$ is reflexive.
- (c) $R \oplus S$ is irreflexive.
- (d) R S is irreflexive.
- (e) $S \circ R$ is reflexive.