True or false:

1. SD+ is stronger than SD.

2. If \( \{ P \} \vdash Q \) in SD, then \( \emptyset \vdash P \supset Q \) in SD.

3. If \( P \) is true and \( Q \) is true, then \( \{ P \} \vdash Q \) in SD.

4. If \( \{ P \} \nvdash Q \) in SD, then \( \{ P \} \vdash \neg Q \) in SD.

5. If \( P \) is true and \( Q \) is true, then \( \{ P \vdash Q \} \)

6. If \( P \) is true and \( Q \) is false, then \( \{ P \nvdash Q \} \)

7. If \( \Gamma \cup \{ P \} \) is inconsistent, then for some \( Q \in \Gamma \), \( \{ P, Q \} \) is inconsistent.

8. Use appropriate definitions in terms of TVAs to prove the following:
   If \( \Gamma_1 \vdash P \) and \( \Gamma_2 \vdash Q \), then \( \Gamma_1 \cup \Gamma_2 \vdash P \& Q \).