MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) If I pass, I'll party. Write Contrapositive
   A) I'll party if I pass.  B) If I party, then I passed.
   C) If I don't party, I didn't pass.  D) If I don't pass, I won't party.

2) \( \sim q \rightarrow \sim p \) Write Converse
   A) \( q \rightarrow p \)  B) \( \sim p \rightarrow \sim q \)
   C) \( p \rightarrow q \)  D) \( \sim(q \rightarrow p) \)

3) If you like me, then I like you. Write Converse
   A) I like you if you don't like me.  B) I don't like you if you don't like me.
   C) If you don't like me, I don't like you.  D) If I like you, then you like me.

4) \( q \rightarrow \sim p \) Write Inverse
   A) \( p \rightarrow \sim q \)  B) \( \sim p \rightarrow q \)
   C) \( q \rightarrow p \)  D) \( \sim q \rightarrow p \)

5) \( q \rightarrow (\sim p \land r) \) Write Contrapositive (Use one of De Morgan's laws)
   A) \( (p \lor \sim r) \rightarrow \sim q \)  B) \( \sim q \rightarrow (p \lor \sim r) \)
   C) \( q \rightarrow (p \lor \sim r) \)  D) \( \sim(p \land \sim r) \rightarrow q \)

6) He who laughs last, laughs loudest. Write Inverse
   A) If he doesn't laugh loudest, he doesn't laugh last.
   B) If he doesn't laugh last, he doesn't laugh loudest.
   C) If he laughs loudest, he laughs last.
   D) If he laughs last, he doesn't laugh loudest.

7) Love is blind. Contrapositive
   A) If it is blind then it is love.  B) If it is not blind, then it is not love.
   C) If it is not love, it is not blind.  D) If it is blind then it is not love.

Use an Euler diagram to determine whether the argument is valid or invalid.

8) Not all that glitters is gold.
   My ring glitters.
   My ring is not gold.
   A) Valid  B) Invalid

9) All cats like fish.
   Henry does not like fish.
   Henry is not a cat.
   A) Valid  B) Invalid

10) Some investments are risky.
    Real estate is an investment.
    Real estate is risky.
    A) Valid  B) Invalid