

Determine which of the following formulas are WFFs and which are not.

1. $P\sim$
2. $P\sim Q$
3. $(P \rightarrow Q)$
4. $\sim\sim\sim(\sim P \& Q)$
5. $\&\sim P$
6. $P \&\& Q$
7. $\sim(P \vee \sim Q)$
8. $(P \& \vee Q)$
9. $((P \& Q) \rightarrow R)$
10. $P Q \sim R$

Using these sentences letters to symbolize the follow sentences.

Sentence Letter	Interpretation
P	Pam is going.
Q	Quincy is going.
R	Richard is going.
S	Sara is going.

1. Pam is not going.
2. If Pam is going, then so is Quincy.
3. Neither Pam nor Quincy is going.
4. Either Pam is not going or Quincy is not going.
5. If Richard is not going, then Sara is going.
6. Either Pam is going, or Richard and Quincy are going.
7. Pam is not going, but Richard and Quincy are going.
8. If neither Richard nor Quincy is going, then Pam is going.
9. Richard and Quincy are going, although Pam and Sara are not going.
10. If Pam is going, then Sara and Quincy are going.