

Steps for Writing an Indirect Proof

1. Assume the that the conclusion (prove statement) is false.
2. Write a paragraph proof using your assumption as given information to show that the assumption leads to a contradiction of the hypothesis (given statement), or a postulate, theorem, or corollary.
3. Point out that because of the contradiction, the original assumption is false and therefore its negation (which is the original conclusion) must be true.

Given: \overrightarrow{SQ} bisects $\angle PSR$
 $\angle PQS \neq \angle RQS$
Prove: $\overline{PS} \neq \overline{RS}$

