Prove \( q \) from the sentences \( p \lor q \) and \( \neg p \)

**Goal:** \( q \)

**Intuition:** From the premises, it is clear that \( p \) is not true. Therefore, \( q \) must be true. Now how to prove it? We can perhaps prove it on a case by case basis.

The premise \( p \lor q \) says that at least one of \( p \) or \( q \) is true.  
**Case 1:** If \( p \) is true, then we prove that \( q \) is true.  
**Case 2:** If \( q \) is true, then we're done. This case by case proof is exactly what **OR Elimination** is.

**High-level Approach:**
1. Prove \( p \rightarrow q \)
2. Prove \( q \rightarrow q \)
3. Use **OR Elimination** (with premise \( p \lor q \))

Proving \( p \rightarrow q \) [Steps 3-12]
- Assume \( p \) and prove \( q \).

Observation: By assuming \( p \), we are introducing a contradiction since \( \neg p \) is a premise.