If \( L^r \) norm exists, then the \( L^s \) norm also exists. For, if \( \sum a_i^r \) converges, then there exists some natural number \( N \) such that \( a_i^r < 1 \) for every \( j \geq N \). But then, \( a_j^s < a_j^r \) for every \( j \geq N \), so by the comparison test on sequences, \( \sum a_j^s \) also exists. Thus, \( L^r \subset L^s \), as required. Finding conditions for either inclusion was already established in previous problems - in 2(a), the argument given establishes that if \( \mu(X) < \infty \), then \( r < s \) implies \( L^r \subset L^s \). In 2(b), we proved that the “minimum measure” condition enforces inclusion in the other direction. \( \blacksquare \)