The Pieri rule expresses the product of a Schur function and a single row Schur function in terms of Schur functions. We extend the classical Pieri rule by expressing the product of a skew Schur function and a single row Schur function in terms of skew Schur functions. Like the classical rule, our rule involves simple additions of boxes to the original skew shape. We also give a conjecture (recently proven by Sottile and Lauve) for a skew Littlewood-Richardson rule. (Received September 22, 2009)