Elliptic Dedekind-Rademacher Sums and Transformation Formulae of Certain Infinite Series.

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We give a transformation formula for certain infinite series in which some elliptic Dedekind-Rademacher sums arise. In the course of its proof, we also obtain a transformation formula for elliptic Dedekind-Rademacher sums. When a complex parameter τ tends to $i\infty$, these represent some classical results which include the reciprocity formula for Apostol-Dedekind sums.