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On general series-product identities

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Abstract

We derive the general series-product identities from which we deduce several applications, including an identity of Gauss, the generalization of Winqvist's identity by Carlitz and Subbarao, an identity for θ , the quintuple product identity, and the octuple product identity.

Key words : Jacobi's triple product identity; Recurrence relation; Quintuple product identity; Octuple product identity; Winqvist's identity