

1125-11-1576 **Frank Garvan*** (fgarvan@ufl.edu). *Weighted partition identities and divisor sums.*

We prove two one-parameter q -series identities which specialize to four weighted partition identities. Three of the weighted partition identities have coefficients which are divisor sums. The other is an identity due to Alladi whose right side is Gauss's triangular number series. Some of the proofs depend on q -series results related to the arithmetic of $\mathbb{Q}[\sqrt{2}]$ due to Lovejoy and due to Corson, Favero, Liesinger and Zubairy. (Received September 18, 2016)