1125-VW-486 **Torina Lewis*** (tlewis@cau.edu), Department of Mathematical Sciences, Clark Atlanta Univerty, Atlanta, GA 30314, and **Ronald E. Mickens** (rmickens@cua.edu), Department of Physics, Clark Atlanta University, Atlanta, GA 30314. *The Geometric Triangular Periodic Functions.*

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The (trigonometric) circular and (Jacobi) elliptic functions are two well-known classes of periodic functions. They are based, respectively, on geometric properties of the circle and ellipse; see, W. Schwalm, "Elliptic functions sn, cn, dn as trigonometry". We demonstrate that a similar type of analysis can be done for a triangle where vertices lie on the unit circle. The associated periodic functions are defined and labeled $tc(\theta)$, $ts(\theta)$ and $td(\theta)$, i.e., the triangular cosine, sine, and dine functions. We calculate their explicit representations in terms of θ, and derive several of their fundamental properties. Finally, plots of these functions are given for one period in the variable θ. (Received September 03, 2016)