1086-11-2283 Mathew Rogers* (mathewrogers@gmail.com). New formulas for special values of the Ramanujan zeta function.

Ramanujan's zeta function is defined by $\sum_{n=1}^{\infty} \frac{\tau(n)}{n^s}$, where $\tau(n)$ is the Ramanujan tau function. I will show how to prove new formulas for values outside of the critical strip, such as at s=12 and s=13. The method is based on an approach that was recently used to solve certain special cases of the Bloch-Beilinson conjectures for elliptic curves. (Received September 25, 2012)