

Some new proofs concerning partitions and the Rogers–Ramanujan continued fraction

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ABSTRACT. I will do several things. I will present my recent proof of Ramanujan’s partition congruence $p(11n + 6) \equiv 0 \pmod{11}$. I will present a new derivation of the Rogers–Ramanujan continued fraction result without using the Rogers–Ramanujan identities. I will examine the result first observed by George Szekeres that the sign of the coefficients in the expansion of the Rogers–Ramanujan continued fraction (and of its reciprocal) is periodic with period 5.

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