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*The power of prime powers in the building of designs*

Assuming the weight  $p$  in a weighing matrix  $W(n, p)$  is a prime power, it is shown that there is a

$$W\left(\frac{p^{m+1}-1}{p-1}(n-1)+1, p^{m+1}\right)$$

for each positive integer  $m$ . The case of  $n = p + 1$  reduces to the balanced weighing matrices with classical parameters

$$W\left(\frac{p^{m+2}-1}{p-1}, p^{m+1}\right).$$