1163-11-1287 **Enrique Treviño*** (trevino@lakeforest.edu), 555 N Sheridan Rd, Lake Forest College, Lake Forest, IL 60045. *Partitioning powers into sets of equal sum.* Preliminary report.

For integers $k \geq 1$ and $m \geq 2$, we explore for which integers n can the set $\{1^k, 2^k, \ldots, n^k\}$ be partitioned into m sets of equal sum. Most of the literature on the problem focuses on finding the least n for which a partition is possible. In our work we focus on finding all n given k and m. (Received September 15, 2020)