

# The complexity of cake cutting with unequal shares \*

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We investigate the problem of proportional cake cutting with unequal shares. In this setting, each player is entitled to receive a predetermined portion of the cake. The efficiency of a protocol is measured by the number of queries asked from players. Our contribution is twofold. First we present a protocol that delivers a proportional solution in less queries than all known algorithms. We then show that our protocol is the fastest possible by giving an asymptotically matching lower bound.

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\*Based on a joint work with Tamás Fleiner. <https://arxiv.org/abs/1709.03152>