For any pair of positive integers \((p, q)\) such that \(\phi = p/q\), where \(\phi\) is the positive root of \(\phi = 1 + 1/\phi\), there is yet another pair \((q, p-q)\) with the same property, and whose sum is smaller. Since \(\phi \neq 2/1\), there can't be such a pair. \(\Box\)