

MATH 180, MINITEST 1

Choose two. You may use facts from class and homework without proof.

- (1) Explain why the continued fraction expansion of a rational number must terminate.
- (2) Name a fraction that is connected by an edge to $17/5$ in the Farey graph.
- (3) For any finite-depth continued fraction $\alpha = [a_0, a_1, \dots, a_k]$, prove that α and its reverse ($\beta = [a_k, a_{k-1}, \dots, a_0]$) have the same numerator.