Consider an Enhanced-FA as an FA that can move left or right on the input (equivalently a TM that is not allowed to write on the tape nor to move off the input).

Show that the acceptance problem for Enhanced-FA is decidable.

Say the input $w$ has length $n$ and the Enhanced-FA has $k$ states. We claim that if $w$ is accepted, then the shortest accepting computation branch has length at most $kn$.

For, assume $w$ is accepted and look at shortest accepting computation branch. Suppose the branch has length more than $nk$ steps. Then somewhere we must repeat the same state and head position; say at time $i$ and time $j$. Then the computation between $i$ and $j$ can be removed and we still have an accepting computation, contradicting the claim that this was the shortest branch.

Thus run Enhanced-FA for $nk + 1$ steps through all possibilities. If no branch reaches acceptance within that time, then input $w$ is not in the language. If some branch reaches acceptance within that time, then input is in the language.