K. A fox among the h (1/1)

K-1 BE, KIWUS, FLI, FLEUM, GEES

K-2 Dumutche's program doesn't stop applying rules when one of them succeeds – it keeps looking for applicable rules and then applies them to the output of the previous rules.

This gives the right output for "walruses" and "foxes" – it removes the "s", then continues on and removes the "e" – but goes very wrong with "horses", "hens", etc.

K-3 We can determine that:

"Remove S" must come before "Remove E"; otherwise, we would get WALRUSE, FOXE, MOU, etc. instead.
"Remove S" must come before "Remove EN"; if it came after, we would get HEN instead.
"Remove S" must come before "Replace IES with Y",; if it came after, we would get GUPPY instead.
"Remove S" must come before "Replace I with US"; if it came after, we would get FUNGU instead.
"Replace I with US" must come before "Remove E"; if it came after, we would get GUPPUS instead.
"Remove E" must come before "Replace A with UM"; if it came after, we would get ALGA instead.
"Replace ICE with OUSE" must come before "Remove E"; if it came after, we would get MIC instead.

Rules do not apply twice – that is, Dumutche's program probably goes through each rule in the list exactly once and only goes through the list once. Otherwise, we would get things like CHIMPANZ or WALRU, etc.

K-4 There is no one order of rules that will make Dumutche's program work, for several reasons:

1. The feeding of "Remove E" by "Remove S" is necessary to get "walrus" and "fox" correct, but it's exactly this interaction that produces "hors" and "chimpanzee."

2. No order will correctly produce "mouse." Consider the two rules (A) "Remove E" and (B) "Replace ICE with OUSE". If A comes before B, we get "mic"; if B comes before A, we get "mous" (or even "mou").