Questions

1. As mentioned in Lemma 13, T is any valid transformation of size t. A T is valid for x and y only if the number of *delete* and *replace* operations in $T \leq |x|$ and the number of *insert* and *replace* operations in $T \leq |y|$.
   In the proof, it is mentioned that *if* $g(x, y, \rho) \in G_T$ *and* $g(x, y, \rho)$ *is complete, then* T *is a prefix of* $\mathcal{T}(x, y, \rho)$.
   If we are given x, y, and ρ, then we can have only one gridwalk $g(x, y, \rho)$ which gives rise to only one transformation $\mathcal{T}(x, y, \rho)$, but we can have multiple valid T. How does the above statement hold true?

2. In Lemma 13, while defining g'', the proof mentions: g'' *consists of loop and match operations concatenated onto the end of* $g' \cdot \sigma$*, ending with a match operation.* Consider a simple case where $h_\rho(x) = h_\rho(y)$, the last element in transcript would process \$ and have same value of $|s|$, hence the transcript could be hash-replace - hash-replace, in which case the Edit Distance operation would be replace, in this case σ i.e., the gridwalk would be of the form $g' \cdot \sigma$ and would not have the *match* operation mentioned above.

3. The proof of Lemma 14 mentions: *By Lemma 13,* h *induces* T *on* x *and* y *(which is sufficient for* $h(x) = h(y)$ *by Lemma 12) with probability* $p^r - 2/n^2$. Lemma 12 mentions the case where T ***solves*** x *and* y and the probability is derived from Lemma 13 which mentions T *of length* t *that is* ***valid*** *for* x *and* y.