Assignment 1

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1. Schemata A1 has more wildcards than A2: $o(A1) < o(A2)$. Since both schemata have the same amount of bits, the chance of a non-wildcard bit flipping in A1 is less than the chance of that happening in A2.

   Mathematically, this can be computed as follows (with $p_m = 0.01$):

   - Probability of a bit not being flipped after mutation: $1 - p_m = 0.99$.
   - Probability that A1 survives: $S_m(A1) = (1 - p_m)^{o(A1)} = 0.99^4 \approx 0.961$.
   - Probability that A2 survives: $S_m(A2) = (1 - p_m)^{o(A2)} = 0.99^5 \approx 0.951$.

2. a)

$$T = \{y, true, x, z\}$$