Questions for Pattern Avoidance

Question 1

Give two permutations in S_3 that 51234 avoids.

Question 2

What is the flip of 163542? For what $\pi \in S_6$ is the sequence $(a_n(\pi))$ definitely equal to $(a_n(163542))$?

Question 3

Give two permutations of S_6 that are in T_6, and one permutation that is not.