Behavioural equivalence between processes

Consider the following processes:

\[
\begin{align*}
P_1 &= a | a.b \\
P_2 &= a.(b | a) \\
P_3 &= a.a.b + a.(b.a + a.b) \\
P_4 &= a.(\nu n)(\pi \mid n.a.b \mid n.b.a)
\end{align*}
\]

1. Draw the LTS for each of these processes.

2. Which ones are strongly bisimilar and which are not? For bisimilar processes, write a bisimulation proof, possibly using some up-to technique. For non-bisimilar processes, justify your answer.

3. Same question for weak bisimilarity.