

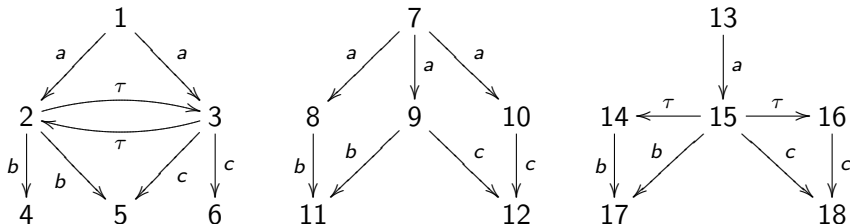
Homework till the 27th of June

- Show that

$$(P|[\{a\}]|Q) |[\emptyset]| (P|[\{a\}]|Q) \not\approx (P|[\emptyset]|P) |[\{a\}]| (Q|[\emptyset]|Q),$$

where $P \stackrel{\text{def}}{=} b.P'$, $P' \stackrel{\text{def}}{=} a.P$, $Q \stackrel{\text{def}}{=} c.Q'$ and $Q' \stackrel{\text{def}}{=} a.Q$. (You may write $||_L$ instead of $|[L]|$ and $||$ instead of $|[\emptyset]|$, if you like.)

- Let the following LTS be given.



Prove that $1 \not\approx 7$, $1 \not\approx 13$ and $7 \not\approx 13$.