Lemma 5

$A \leftarrow$ Timed automata
$S \leftarrow$ set of locations
$X \leftarrow$ set of clocks $\quad |X| = n$

m_x is the max const.

$\forall m \geq 0$, the no. of m-constrained bound-labelled regions of A is atmost,

$$4 \cdot |S| \cdot n! \cdot 2^{n+2} \cdot (m+2)^{2(n+1)} \cdot \prod_{x \in X} (m_x + 1)$$

- $|S|$: no. of states
- $n!$: permutation of clocks
- $\prod_{x \in X} (m_x + 1)$: value of each clocks