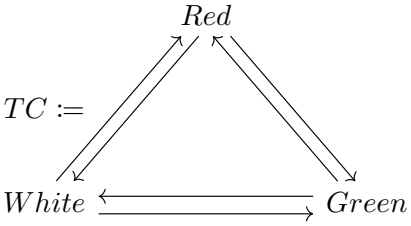

$\forall G \in Ob(Graph),$ Tricolorings of $G = G \to TC$

$\forall A, G \in Ob(Graph), x \in A \to G$

Tricolorings induced by $x = tc \circ x \; \forall tc \in G \to TC$

$\forall A \in Ob(Graph), x \in A \to G, y \in$ Tricolorings induced by x,

$\exists tc \in G \to TC \mid tc \circ x = y$

$tc \circ x \in A \to TC \implies$

$y \in A \to TC \implies$

$y \in$ Tricolorings of $A \implies$

($y \in$ Tricolorings induced by $x \implies y \in$ Tricolorings of A) $\implies$

Tricolorings induced by $x \subseteq$ Tricolorings of A

$\forall A, G \in Ob(Graph), x \in A \to G$

Induced tricoloring is a tricoloring