Satisfiability, Entailment:

- Interpretation $I \models t_1 \equiv t_2$ iff $I(t_1) = I(t_2)$
- Algebra $(\mathcal{A}, \alpha) \models t_1 \equiv t_2$ iff $I \models t_1 \equiv t_2$ for all $I = (\mathcal{A}, \alpha, \beta)$
- Set of Equations $\mathcal{E} \models t_1 \equiv t_2$ iff $A \models \mathcal{E}$ implies $A \models t_1 \equiv t_2$
- Word Problem: $t_1 \equiv_{\mathcal{E}} t_2$ iff $\mathcal{E} \models t_1 \equiv t_2$

Substitution:

- Substitution $\sigma : \mathcal{V} \to \mathcal{T}(\Sigma, \mathcal{V})$ with $\sigma(x) \neq x$ for finitely many $x \in \mathcal{V}$
- Domain: $DOM(\sigma) = \{x \in \mathcal{V} \mid \sigma(x) \neq x\}$
- Substitution on Terms: $\sigma(f(t_1, \ldots, t_n)) = f(\sigma(t_1), \ldots, \sigma(t_n))$
- Matching: s matches t iff $s\sigma = t$

Stability of a Relation $\to$: $t_1 \to t_2$ implies $t_1\sigma \to t_2\sigma$