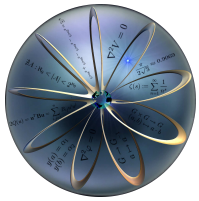

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definable type

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Defines	defining scheme

Let M be a first order structure. Let A and B be sets of parameters from M. Let p be a complete n-type over B. Then we say that p is an A-*definable* type iff for every formula $\psi(\bar{x}, \bar{y})$ with $\ln(\bar{x}) = n$, there is some formula $d\psi(\bar{y}, \bar{z})$ and some parameters $\bar{a}$ from A so that for any $\bar{b}$ from B we have $\psi(\bar{x}, \bar{b}) \in p$ iff $M \models d\psi(\bar{b}, \bar{a})$.

Note that if p is a type over the model M then this condition is equivalent to showing that $\{\bar{b} \in M : \psi(\bar{x}, \bar{b}) \in M\}$ is an A-definable set.

For p a type over B, we say p is *definable* if it is B-definable.

If p is definable, we call $d\psi$ the *defining formula* for ψ, and the function $\psi \mapsto d\psi$ a defining scheme for p.