Problems and Axiom Sets from the TPTP

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Macros that make problems and axiom sets from the TPTP or in TPTP FOF or CNF format conveniently available as subformulas. Formalized with the *PIE* system.

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tptp(*ProblemSpec*)

Defined as

$$F,$$

where

$$\text{tptp\_problem}(\text{ProblemSpec}, [\text{validate} = \text{false}], \text{Format}, \text{T}, \text{A}),$$
$$[\ldots \textit{unformattable Prolog code}].$$

F represents the TPTP problem as reverse implication *Theorem* $\leftarrow$ *Axioms*. Here are some examples for using the *tptp* macro:

```
?- mac_expand(tptp('PUZ001+1')).
?- ppl_form(tptp(' PUZ001+1'), [expand=true, style=full]).
?- ppl_valid(tptp('PUZ001+1'), [prover=cm]).
?- ppl_ipol(tptp('PUZ001+1'), [style=full]).
?- ppl_ipol(tptp('PUZ001+1'), [style=full,debug=10]).
```

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tptp_axioms(*AxiomsSpec*)

Defined as

$$F,$$

where

$$\text{tptp\_problem}(\text{axioms}(\text{AxiomsSpec}), [\text{validate} = \text{false}], \text{Format}, \text{T}, \text{A}),$$
$$[\ldots \textit{unformattable Prolog code}].$$

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