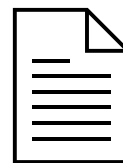
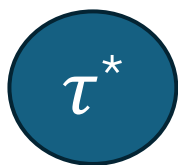


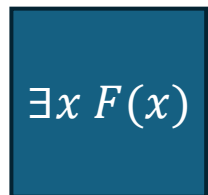
Formal
specification of
desired behavior



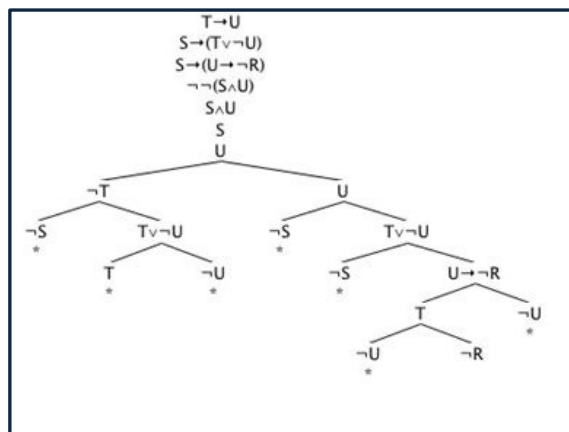
ASP
program



Translation



First-order
formulas



Automated
theorem prover



```
tff(f104,plain,(
  $less(1,'a$i'),
  inference(cnf_transformation,[],[f23])).
tff(f23,plain,(
  $less(1,'a$i'),
  inference(theory_normalization,[],[f16])).
tff(f16,axiom,(
  $greater('a$i',1),
  file('zh/backward_problem_1.p',assumption)).
tff(f180,plain,(
  ~spl11_5),
  inference(avatar_split_clause,[],[f99,f178])).
tff(f176,plain,(
  ~spl11_4),
  inference(avatar_split_clause,[],[f100,f174])).
tff(f172,plain,(
  spl11_3),
  inference(avatar_split_clause,[],[f101,f170])).
tff(f101,plain,(
  sK0 = f_integer__(sK1),
  inference(cnf_transformation,[],[f70])).
tff(f168,plain,(
  ~spl11_2),
  inference(avatar_split_clause,[],[f102,f166])).
tff(f166,plain,(
  spl11_2 <=> composite(sK0),
  introduced(avatar_definition,[new_symbols(naming,
  ~spl11_1),
  inference(avatar_split_clause,[],[f103,f162])).
tff(f162,plain,(
  spl11_1 <=> prime(sK0),
  introduced(avatar_definition,[new_symbols(naming,
  % SZS output end Proof for backward_problem_1
```

Proof of
program's
correctness