$$c1 := \exists (v) \in (\{1, 2, 3\}) \cdot (v) \in (\{2, 4, 6\})$$
 (1)

$$c2 := \forall (v) \in (\{1,3\}) \cdot ((v) \in (\{-5 ... 5\})) \land (((v) \mod (2)) = (1))$$

$$c3 := \exists (x) \in (\{1 .. 2\}) . \exists (y) \in (\{\exists (z) \in (\emptyset) . \text{ true } \}) . ((x) < (1.5)) \land (y)$$
 (3)

$$c4 := \forall (x) \in (\varnothing) . ((x) > (0)) \lor (\exists (y) \in (\{x ... (x) + (3)\}) . (y) < (0))$$

$$(4)$$

test:

cmd:>pp(c1)

"true"

cmd:>pp(c2)

"true"

cmd:>pp(c3)

"false"

cmd:>pp(c4)

"true"