`¬ ∧ ∨ →

1. Predicate symbols: P, O, C, R, H

Terms: x, y

* 1. Predicate symbols with arities: = (arity 2)

Function symbols with arities: + (arity 2)

1. Predicate symbols with arities: prime (arity 1), > (arity 2), ∈ (arity 2)

Function symbols with arities: N (arity 0), / (arity 2)

1. Predicate symbols with arities: R (arity 2), A (arity 0), B (arity 1), R (arity 1)

Function symbols with aritys: ε (arity 1), g (arity 2), f (arity 1), δ (arity 1), σ (arity 2), a (arity 0), bc (arity 0)

1. * 1. Ɐx(H(x) -> ¬D(x)), H(x) -> ¬D(x), H(x), ¬D(x), D(x)

The first one is closed, the rest are open

* + 1. Ɐx(C(x) -> (A(x) ∨ D(x))), C(x) -> (A(x) ∨ D(x)), C(x), A(x) ∨ D(x), A(x), D(x)

The first one is closed, the rest are open

* + 1. ⱯxⱯy(O(x, y) -> R(x,y)), O(x, y) -> R(x,y), O(x, y), R(x,y)

The first one is closed, the rest are open

* 1. 1. ⱯxⱯy(x + y = y + x) closed

x + y = y + x open

* + 1. Ɐx(prime(x) <-> ¬∃n(n ∈ N ∧ n > 1 ∧ x/n ∈ N)) closed

prime(x) <-> ¬∃n(n ∈ N ∧ n > 1 ∧ x/n ∈ N) first open only

prime(x) open

¬∃n(n ∈ N ∧ n > 1 ∧ x/n ∈ N) closed

∃n(n ∈ N ∧ n > 1 ∧ x/n ∈ N) closed

n ∈ N ∧ n > 1 ∧ x/n ∈ N open

n ∈ N open

n > 1 open

x/n ∈ N open

* + 1. ⱯxⱯz∃y(R(ε(x), g(y, z)) -> A ∨ (B(f(g(x, y))) ∧ R(δ(σ(a,bc))))) closed

Ɐz∃y(R(ε(x), g(y, z)) -> A ∨ (B(f(g(x, y))) ∧ R(δ(σ(a,bc))))) closed

∃y(R(ε(x), g(y, z)) -> A ∨ (B(f(g(x, y))) ∧ R(δ(σ(a,bc))))) closed

R(ε(x), g(y, z)) -> A ∨ (B(f(g(x, y))) ∧ R(δ(σ(a,bc)))) open

R(ε(x), g(y, z)) open

A ∨ (B(f(g(x, y))) ∧ R(δ(σ(a,bc)))) open

A open

B(f(g(x, y))) ∧ R(δ(σ(a,bc))) open

B(f(g(x, y))) open

R(δ(σ(a,bc)))