Standard mode

16:04

% factorial(+N, -F).

N! = F

% factorialDeCat(-N, +F) N! = F

?- factorialDeCat(Cat, 120).

Cat = 120

?- factorialDeCat(Cat, 100).

false.

factorial(0, 1).

factorial(N, F) :- N > 0, PN is N-1, factorial(PN, G), F is G*N.

CUT. PREDICAT ZEROAR.

?- factorialul(-5, 0, Cat).

false.

factorialul(N, F) :- integer(N), N >= 0, factorial(N, F).

?- factorialul(5, Cat).

Cat = 120

factorial(0, 1), !.

factorial(N, F) :- PN is N-1, factorial(PN, G), F is G*N.

?- factorial(5, Cat).

Cat = 120; /Next

false.

factorial

5 Cat

factorial

0

factorial(4, G)

24 6 2 1

F is 1*1

120

Switch Add Prev 5/10 Next List

Standard mode

16:04

factorialDeCat(N, F) :- auxfact(N, F, 0, 1).

auxfact(N, F, N, F).

auxfact(N, F, K, G) :- G < F, SK is K+1, H is G*SK, auxfact(N, F, SK, H).

?- factorialDeCat(M, 100).

false.

auxfact(M, 100, 0, 1).

false.

auxfact(M, 100, 1, 1).

false.

auxfact(M, 100, 2, 2).

false.

auxfact(M, 100, 3, 6).

false.

1 < 100

auxfact(M, 100, 4, 24).

false.

auxfact(M, 100, 5, 120).

false.

120 ≠ 100.

100 ≠ 1

auxfact

M 100 0 1

auxfact

N F N F

Switch Add Prev 6/10 Next List

Standard mode

16:04

?- X is -10 div 3.

X = -4.

?- X is -10 mod 3.

X = 2.

?- X is -10 rem 3.

X = -1.

?- 10+2 >= 12+0.

true

false

true

12 = 12

>, <, >=, =<

$(\forall a,b \in \mathbb{Z})$

$\overline{a,b} = \{x \in \mathbb{Z} \mid a \le x \le b\}$

$\overline{a,b} \neq \emptyset \Leftrightarrow a \le b$

$(\forall d \in \mathbb{N})(d \in \overline{2,n-1} \Rightarrow d \nmid n)$

$(\forall d \in \mathbb{N})(2 \le d \le n-1 \Rightarrow d \nmid n)$

$\forall n \in \mathbb{N}$: $n \neq 1$ și $(\forall d \in \mathbb{N})$

n e prim $\overset{def}{\Leftrightarrow}$ $n \geq 2$ și $(\forall d \in \overline{2,n-1})(d \nmid n) \Leftrightarrow$

$n \geq 2$ și $(\forall d \in \overline{2,n-1})(d$ e prim $\Rightarrow d \nmid n)$

$(\forall n \in \mathbb{Z} \setminus \mathbb{N})(n$ e prim $\overset{def}{\Leftrightarrow} -n$ e prim$)$

Switch | Add | Prev 7/10 | Next | List

Undo | Redo | Select | Multi | Clear

Standard mode

16:03

% e prim(-N). = true $\Leftrightarrow$ N e prim.

% musedir(D,N) = true $\Leftrightarrow (\forall K \in \overline{D,N-1})(K \nmid N)$

prim(N) :- integer(N), (N >= 0, auxprim(N);

write(oupa), K is -N, auxprim(K))

auxprim(N) :- musedir(2,N).

musedir(N,N).

musedir(D,N) :- D < N, N mod D > 0,

SD is D+1, musedir(SD,N).

?- prim(5).

true

?- prim(4).

false

prim(N) :- integer(N), N >= 0, auxprim(N).

prim(N) :- integer(N), N < 0, K is -N, auxprim(K).

$\Updownarrow$

prim(N) :- integer(N), (N >= 0, auxprim(N);

N < 0, K is -N, auxprim(K)).

Switch | Add | Prev 8/10 | Next | List

Pen | Eraser | Shape | Bg | Undo | Redo | Select | Multi | Clear

Standard mode

16:03

% listaprime(+N, -L).

$\{p \in \overline{2,N} \mid p$ e prim$\}$

?- listaprime(15, Lista).

Lista = [13, 11, 7, 5, 3, 2].

```
listaprime(N,[]).:- N=<0, !.
listaprime(N, [N|T]) :- prim(N), !, PN is N-1,
                        listaprime(PN,T).
listaprime(N,T) :- PN is N-1, listaprime(PN,T).
```

Standard mode

16:03

2 3 ~~4~~ 5 ~~6~~ 7 ~~8~~ ~~9~~ ~~10~~ 11 ~~12~~

13 ~~14~~ ~~15~~

```
cmr(N,LP) :- lista(2,N,L), cmmire(L,LP).
lista(X,N,[X|T]) :- X<=N!, SX is X+1,
                    lista(SX,N,T).
lista(_,_,[]).
cmmire([],[]).
cmmire([H|T],[H|L]) :- filtreaza(H,T,M),
                       cmmire(M,L).
filtreaza(_,[],[]).
filtreaza(X,[H|T],[H|L]) :- H mod X>0, !,
                            filtreaza(X,T,L).
filtreaza(X,[_|T],L) :- filtreaza(X,T,L).
```

?- cmr(15, L).

L = [2, 3, 5, 7, 11, 13].