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:- consult('gv.pro').

establish_crypto_problem_parameters :-
    declare(lo,0),
    declare(hi,9).

:- establish_crypto_problem_parameters.

generate_random_crypto_number(R) :-
    value_of(lo,Lo),
    value_of(hi,Hi),
    HiPlus1 is Hi+1,
    random(Lo,HiPlus1,R).

add_crypto_problem_to_KB(N1,N2,N3,N4,N5,G) :-
    undeclare(crypto_problem),
    declare(crypto_problem,
    problem(numbers(N1,N2,N3,N4,N5), goal(G))).

add_crypto_problem_to_KB(N1,N2,N3,N4,N5,G) :-
    declare(crypto_problem,
    problem(numbers(N1,N2,N3,N4,N5), goal(G))).

generate_random_crypto_problem :-
    generate_random_crypto_number(N1),
    generate_random_crypto_number(N2),
    generate_random_crypto_number(N3),
    generate_random_crypto_number(N4),
    generate_random_crypto_number(N5),
    generate_random_crypto_number(G),
    add_crypto_problem_to_KB(N1,N2,N3,N4,N5,G).

generate_one :-
    generate_random_crypto_problem,
    display_problem.

generate(1) :-
    generate_one.

generate(N) :-
    generate(1),
    NM1 is N-1,
    generate(NM1).

display_problem :-
    value_of(crypto_problem,
    problem(numbers(N1,N2,N3,N4,N5), goal(G))),
    write("Problem : numbers = {"),
    write(N1),write(", "),
    write(N2),write(", "),

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write(N3),write(", "),
write(N4),write(", "),
write(N5),write("} and goal = "),
write(G),
nl.
```