```prolog
% $Id: guessverify.pl,v 1.3 2012-03-15 13:28:08-07 - - $

%
% Illustrate guess and verify style.
% We have a set of numbers and we want to find all pairs
% where the first number is greater than the second.
%

a_number( 1.41421356237309504880).
a_number( 2.5).
a_number( 2.71828182845904523536).
a_number( 3.14159265358979323846).
a_number( 6.02e23).
a_number( 8).

guess( X, Y) :- a_number( X), a_number( Y).

verify( X, Y) :- X > Y.

getpair( X, Y) :- guess( X, Y), verify( X, Y).

% TEST: getpair( X, Y).
% TEST: ;
% TEST: ;
% TEST: ;
% TEST: ;
% TEST: ;
% TEST: ;
% TEST: ;
% TEST: ;
% TEST: ;
% TEST: ;
% TEST: ;
```

```
spawn gprolog
[guessverify].

GNU Prolog 1.3.1
By Daniel Diaz
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| ?- [guessverify].
compiling /afs/cats.ucsc.edu/courses/cmps112-wm/Languages/prolog/Examples/guessverify.pl for byte code...
/afs/cats.ucsc.edu/courses/cmps112-wm/Languages/prolog/Examples/guessverify.pl compiled, 33 lines read - 1454 bytes written, 11 ms

yes
| ?-
getpair( X, Y).

X = 2.5
Y = 1.4142135623730951 ?

yes
| ?- ;

;

```