```
% SSS
% This program solves any triangle, if we know the
% three sides. It computes three angles and traverses
% the triangle (clock or counter clockwise depending
% on the order in which you entered the three side
% values) and outputs SIDE ANGLE SIDE ANGLE SIDE ANGLE.
% By L.Linares 2011

%                       A3
%                      /|
%                  S1/ |
%                   /  |S3
%                  /   |
%               A1 ---- A2
%                   S2

% VERY IMPORTANT: To type this program on a regular
%   text file, I had to replace some HP50 keys by
%   certain strings. So ...
%   Where I wrote        you type
%        *               [multiply key]
%        ACOS            [WHITE SHIFT] COS
%        ^               [y to the x key]
%        SQRT            press square root key (*)
%        ->TAG           [WHITE SHIFT] PRG/TYPE/->TAG
%        ->              [RED SHIFT] [zero key]
%   (*) Do NOT type the letters SQRT ... it won't work!
% Usage: Enter the three side lengths on the stack
%        3: S1
%        2: S2
%        1: S3
%        Then run the program!
% VERY IMPORTANT: Store this program as 'SSS',
% because the other four programs in this series
% will "call" this one by that name!
% This program is provided on a "as is" basis, for
% reference ONLY, and no warranty of its accuracy or
% correctness is made. If you use it, you use it at your
% own risk.

<<
   -17 FS?
   -> S1 S2 S3 X
   <<
      IF 'X==1' THEN DEG END
      'ACOS((S3^2 - S1^2 - S2^2)/(-2*S1*S2))' EVAL
      'ACOS((S1^2 - S2^2 - S3^2)/(-2*S2*S3))' EVAL
      'ACOS((S2^2 - S1^2 - S3^2)/(-2*S1*S3))' EVAL
      -> A1 A2 A3
      <<
         S1 'S1' ->TAG
         A1 'A1' ->TAG
         S2 'S2' ->TAG
         A2 'A2' ->TAG
         S3 'S3' ->TAG
         A3 'A3' ->TAG
      >>
      IF 'X==1' THEN RAD END
   >>
>>
```