```
% ASA
% This program solves any triangle, if we know any
% two angles and the side between them. It computes
% the remaining data and outputs the triangle data
% as SIDE ANGLE SIDE ANGLE SIDE ANGLE, clockwise
% or counterclockwise, depending on the order in
% you entered your data.
% By L.Linares 2006

%                       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 on the stack
%       3: A3(in degrees)
%       2: S1
%       1: A1(in degrees) ... and call this program.
% VERY IMPORTANT: Store this program under the name 'ASA'.
% 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?
   -> A3 S1 A1 X

   <<
      IF 'X==1' THEN DEG END

      'SIN(A3) * S1/SIN(180 - A1 - A3)' EVAL

      -> S2

      << S1 A1 S2 'SAS' EVAL >>
      IF 'X==1' THEN RAD END

   >>

>>
```