```
function [xx yy] = intsct2lines (a1,b1,c1,a2,b2,c2)
% intsct2lines.m - calculate the point of intersection of two lines
%
%   Input: coefficients of two line of the form: aX +bY + c = 0
%        a1,b1,c1,a2,b2,c2
%
%   Output: Point of intersection (x,y)
%
% Syntax:  [xx yy] = intsct2lines (a1,b1,c1,a2,b2,c2)
%
% ***********************************************************************
% Other m-files required:
%
% Subfunctions:
%
% MAT-files required: none
%
% See also: Survey Theory & Practice, 7th ed. J.Anderson, E.Mikhail
%  pp. 1075, A.24
% ***********************************************************************
% Author: Peter J Dailey, Carlos Ramierz
% 140 Sunset Drive Charleston WV 25301
% email: daileypj@mac.com
% Website: http://
% Last revision: 12-Aug-2009
% ***********************************************************************
%
if nargin<6
  error('Too few input arguments');
elseif nargin>6
  error('Too many input arguments');
end
numXX              = (b1 .* c2) - (c1 .* b2);
denXX              = (a1 .* b2) - (a2 .* b1);
numYY              = (a1 .* c2) - (c1 .* a2);
denYY              = (a2 .* b1) - (a1 .* b2);
xx                 = numXX ./ denXX;
yy                 = numYY ./ denYY;
end

```