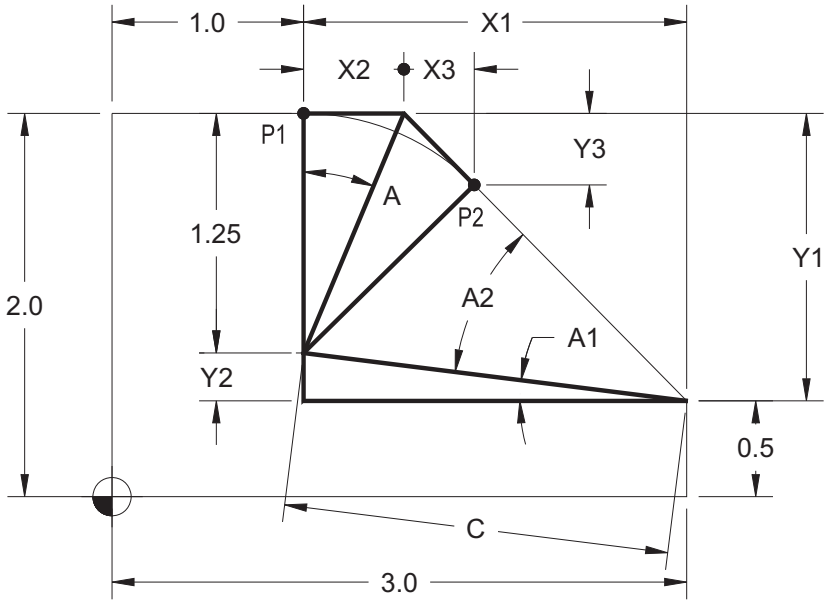
53-07 Solution

Blend Radius 2

This project is similar to the *53-06* project, but a little bit more difficult. Three triangles have to be solved but they are no more difficult once they are identified.



Order of calculations:

X1 = 3.0 - 1.0 = 2.0
Y1 = 2.0 - 0.5 = 1.5
Y2 = Y1 - 1.25 = 0.25
$C = \sqrt{X1^2 + Y2^2} = 2.015564437$
$A1 = \tan^{-1}(Y2 / X1) = 7.125016349°$
$A2 = \sin^{-1}(1.25 / C) = 38.3288181°$
A = (A1 + A2) / 2 = 22.72691723°
X2 = 1.25 x tanA = 0.523576462
X3 = X2 x cos(A1 + A2) = 0.367280371
Y3 = X2 x sin(A1 + A2) = 0.373145335

P1 = X1.0 Y2.0
P2 (X) = 1.0 + X2 + X3 = 1.89086 P2 (Y) = 2.0 - Y3 = 1.62685