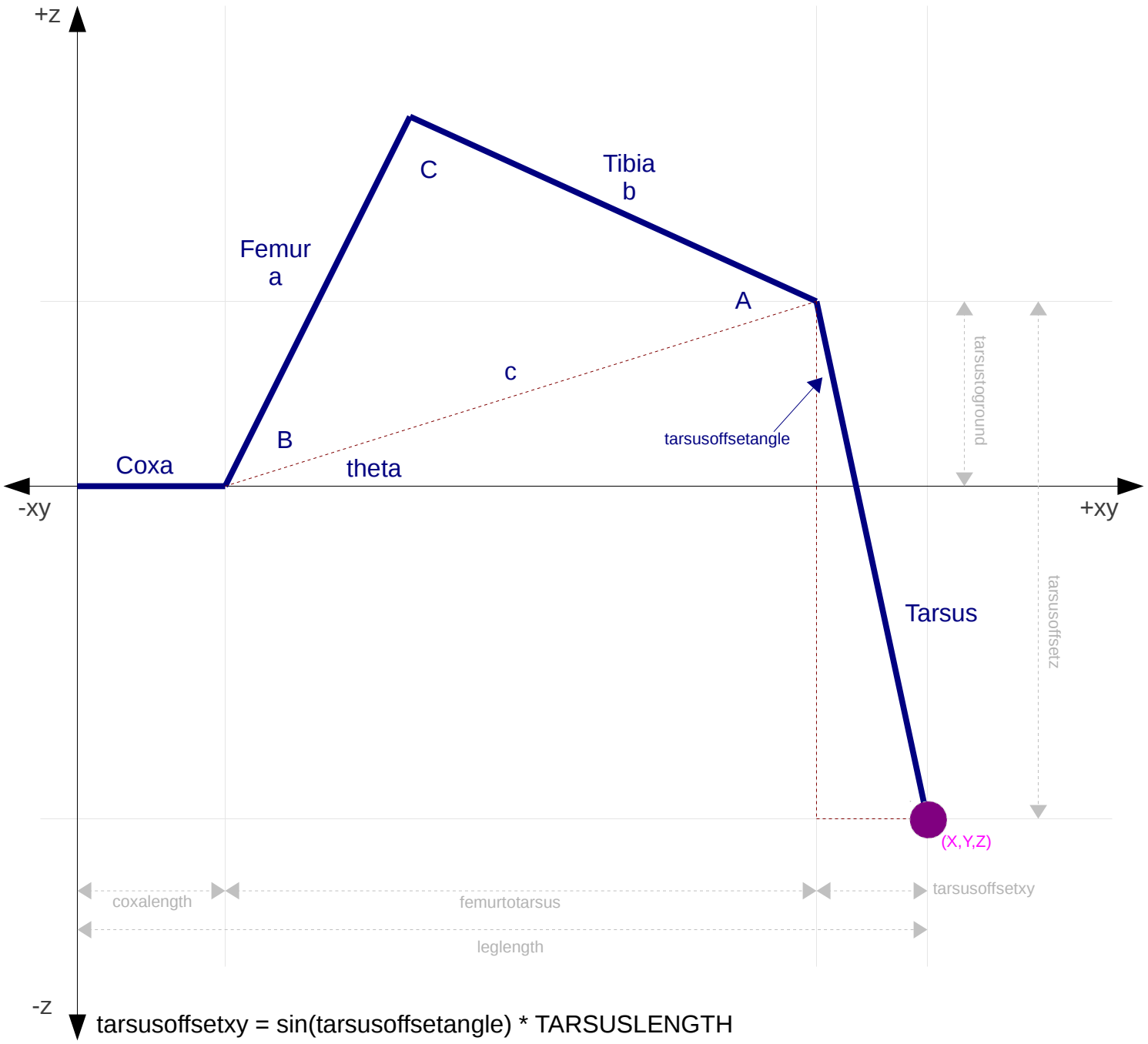

tarsusoffsetxy = sin(tarsusoffsetangle) * TARSUSLENGTH
tarsusoffsetz = cos(tarsusoffsetangle) * TARSUSLENGTH
tarsustoground = Z - tarsusoffsetz
femurtvotarsus = leglength – coxalength - tarsusoffsetxy
theta = atan2(tarsustoground, femurtotarsus)

a = FEMURLENGTH
b = TIBIALENGTH
c = sqrt(femurtotarsus^2 + tarsustoground^2)
A = acos((-a^2+b^2+c^2) / (2*b*c)) * 180/PI
B = acos((a^2-b^2+c^2) / (2*a*c)) * 180/PI
C = acos((a^2+b^2-c^2) / (2*a*b)) * 180/PI