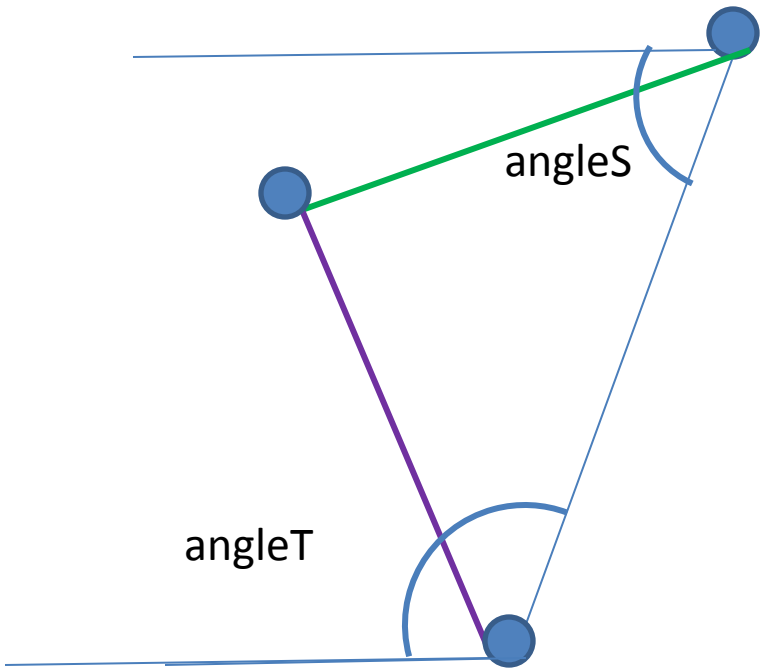
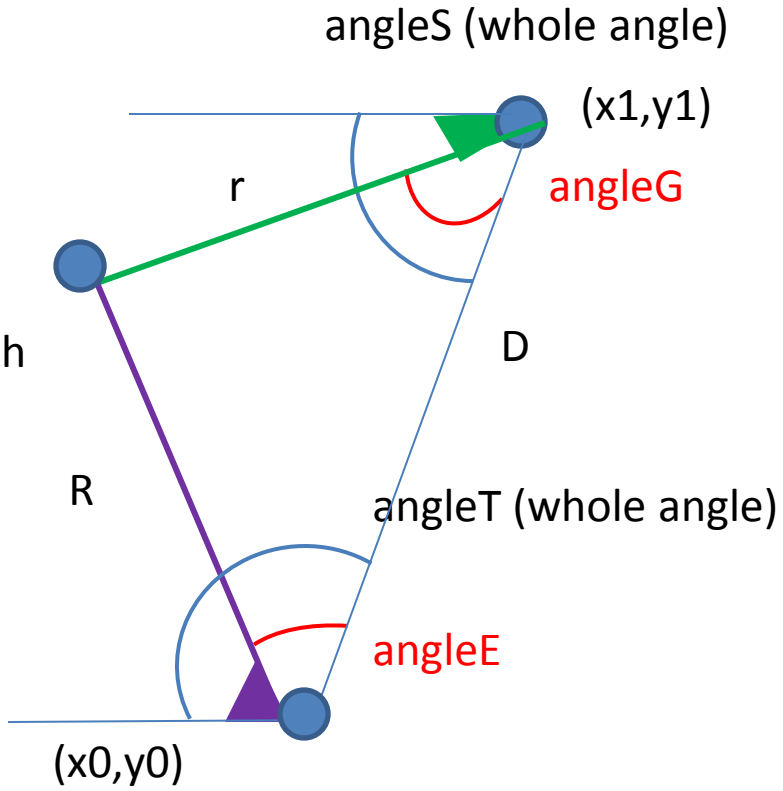
Reversing the relationship



reference (-1,0)

reference now
negative x-axis (-1,0)

So how does that relate?



Now we have:

(-1,0) · (x1-x0, y1-y0)
1 * -x1+x0 + 0 * y1-y0
Which is x0-x1. If we normalize this we end up with
cos(angleT) = x0-x1 / (length of vecD)
angleT = acos((x0-x1)/ sqrt((x1-x0) ^{2} + (y1-y0)^2)
angleS = 180 – angleT

But then we have:

180 + (angleS – angleG) for the green rotation

180 – (angleT – angleE) for the purple rotation