```
>> %r=2/1(cos(theta))
syms r r1 r2 rc theta
r=2/(1-cos(theta));
r1=diff(r,theta);
r2=diff(r,theta,2);
fprintf('The radius of curvature is',rc)
rc=((r^2+(r1)^2)^(3/2))/(r^2+2*(r1)^2-r*(r2))
The radius of curvature is
rc =

((4*sin(theta)^2)/(cos(theta) - 1)^4 + 4/(cos(theta) - 1)^2)^(3/2)/((8*sin(theta)^2)/↙
(cos(theta) - 1)^4 - (2*((4*sin(theta)^2)/(cos(theta) - 1)^3 + (2*cos(theta))/(cos↙
(theta) - 1)^2))/(cos(theta) - 1) + 4/(cos(theta) - 1)^2)

>>
```