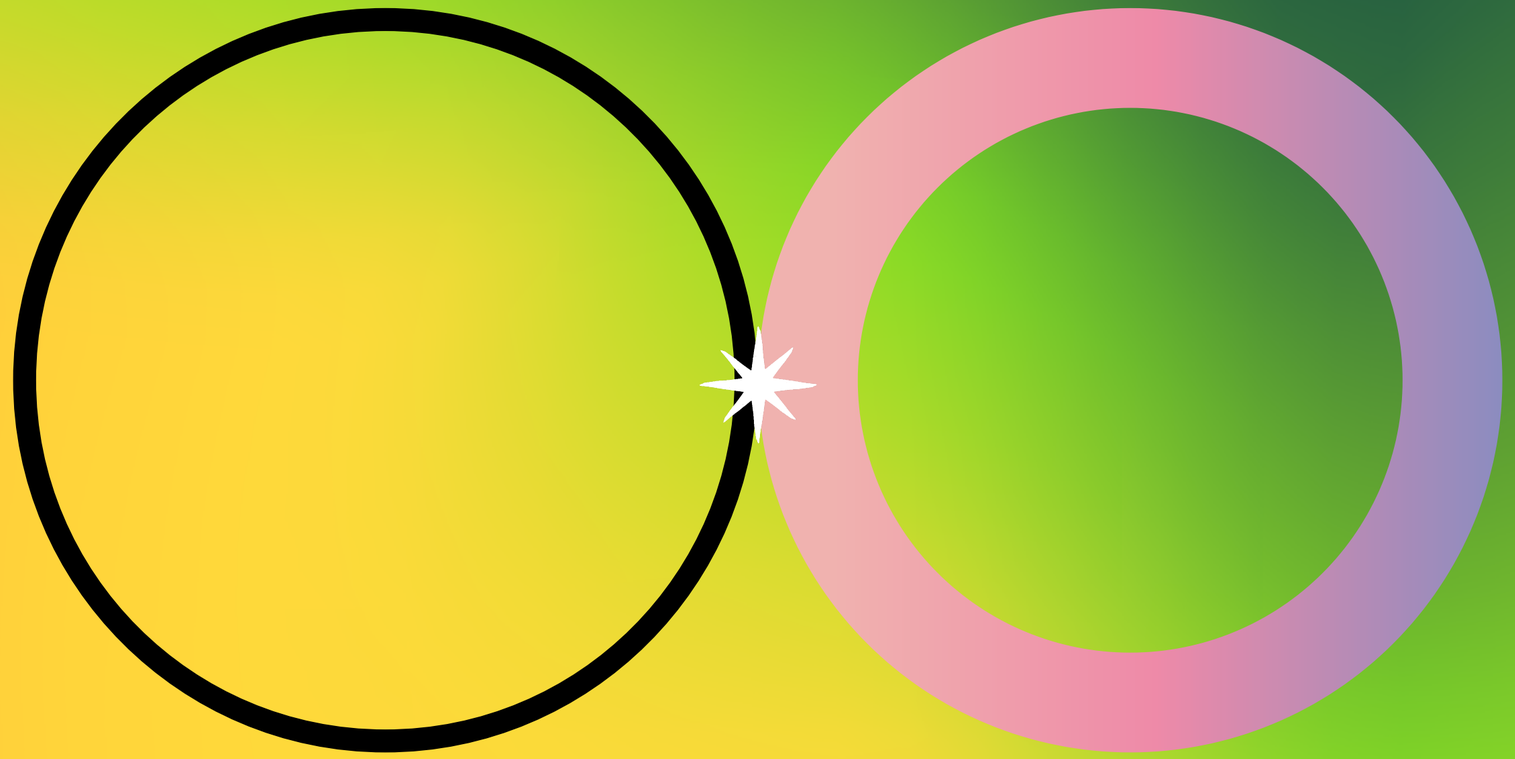
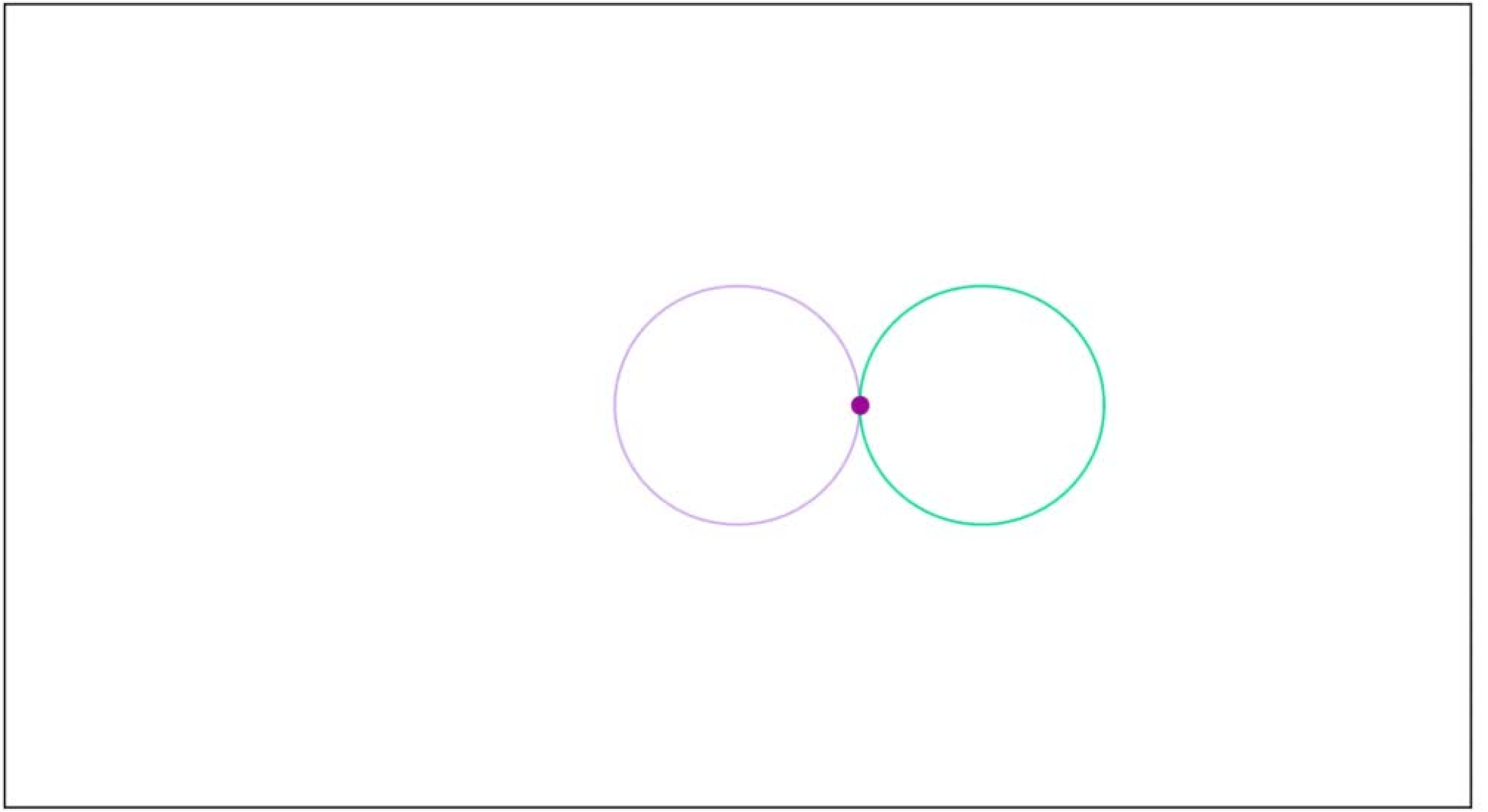
Cardioid

Let's consider a circle

Now another circle of same radius with a common point



Follow the common point on the second circle



What you got is a cardioid

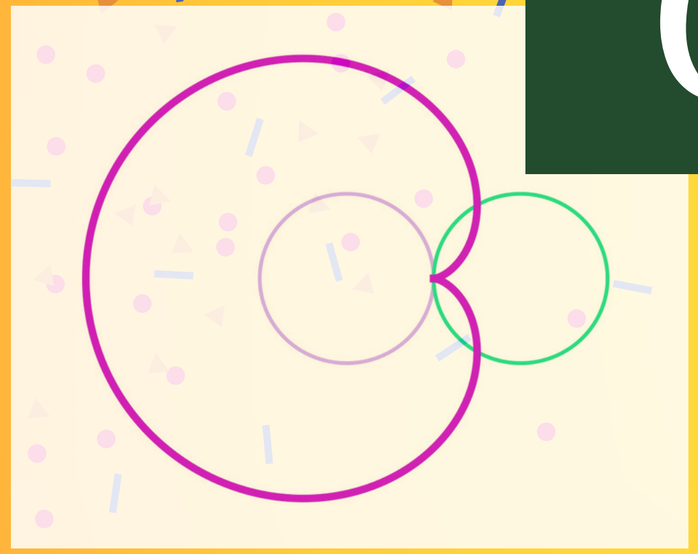
Equation of cardioid

$$x(\phi) = 2a(1 - cos(\phi))cos(\phi)$$

$$y(\phi) = 2a(1 - cos(\phi))sin(\phi)$$

$$0 \leq \phi < 2\pi$$

$$a = Radius$$

Thank You
for
Watching

Cardioid