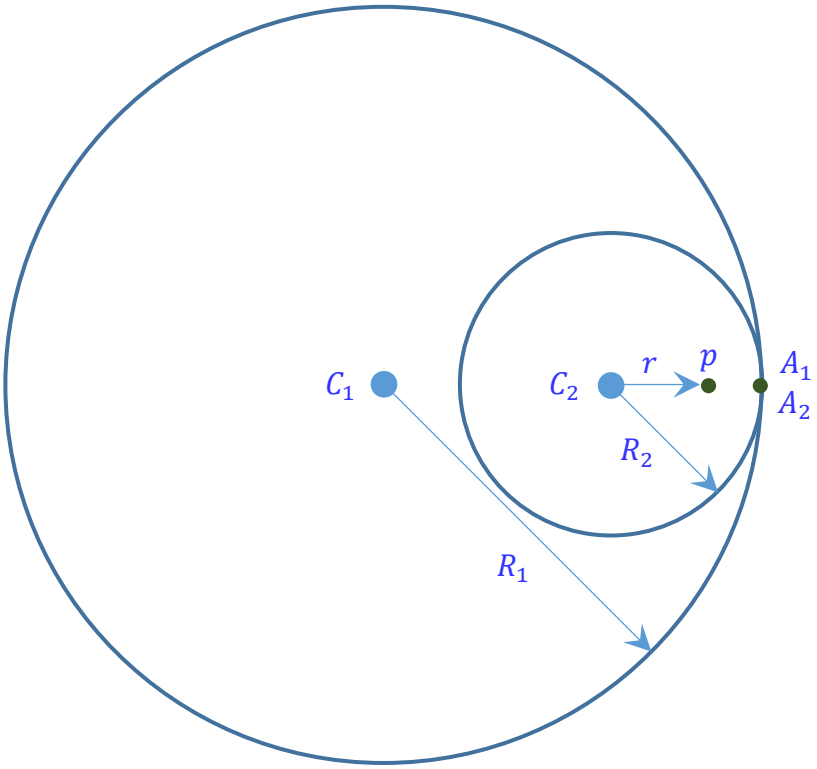
How to draw the flower curve?



Definition:

- Given a big circle C_1 and a small circle C_2, where C_2 can scroll inside C_1.
- A_1 and A_2, two points on C_1 and C_2 respectively, are at the same location at beginning.
- p is a point inside C_2. When C_2 can scrolls inside C_1, the path of p is the flower curve.

Calculation:

1. When C_2 scroll along with C_1 to point B,
   global rotate angle: θ_1, counterclockwise;
   rotate angle of C_2: θ_2, clockwise;
2. $\because$ No slice between C_1 and C_2
   $\therefore \ \|\overline{A_1B}\| = \|\overline{A_2B}\|$,
   where $\|\overline{AB}\|$ is the length of curve AB
3. $\|\overline{A_1B}\| = \|\overline{A_2B}\|$
   $\Rightarrow R_1\theta_1 = R_2\theta_2$
   $\Rightarrow \theta_2 = \dfrac{R_1}{R_2}\theta_1$
4. Coordinate of point $p(x_p, y_p)$
   = Coordinate of C_2 respective to C_1
   + Coordinate of p respective to C_2
5. $\Rightarrow \begin{cases} x_p = (R_1 - R_2)\cos\theta_1 + r\cos(\theta_1 - \theta_2) \\ y_p = (R_1 - R_2)\sin\theta_1 + r\sin(\theta_1 - \theta_2) \end{cases}$