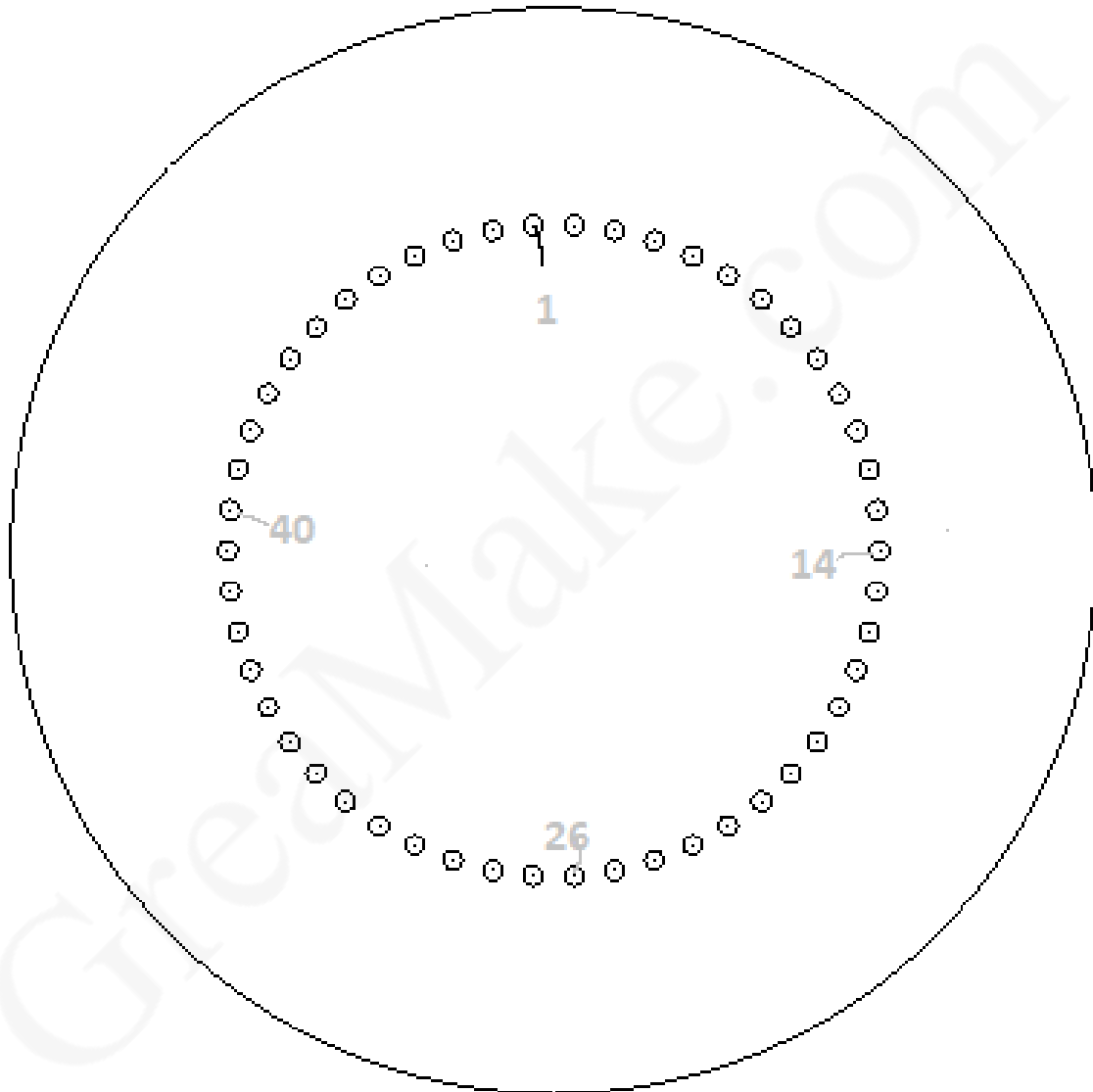
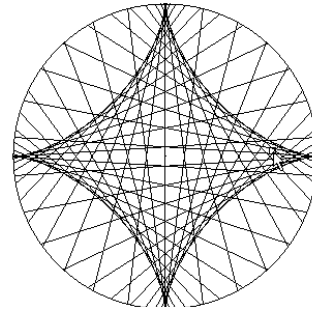


Astroid:

The curve is the path followed by a point on the circumference of a circle of radius one unit as it rolls inside the circumference of a circle of radius four units. It is formed here from its tangents by laying N points equally on a circle (the inner circle), and joining point n to the point $(N/2 - 3n) \bmod N$. The strings are extended to an outer circle whose radius is 2 times the inner circle radius.



Example: $N=50, n=5, \rightarrow (N/2-3n) \bmod N == (25-15) \bmod 50 == 10$. So draw line from 5th point to 10th point and extend the line till the outer circle. $MOD ==$ remainder. $55 \bmod 50 = 5$. $(-5) \bmod 50 = -5$ or 45 (join $n=10$ & 45). $(-95) \bmod 50 == -45$ or $+5$. (join $n=40$ to 5) etc.

Reference: <https://mathworld.wolfram.com/Hypocycloid.html>