

Hypotrochoid Generator

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This generator takes parameters A, B, C to find x and y for the hypotrochoid graph using the equations:

$$x = (A - B) * \cos(t) + C * \cos((A - B) / B * t)$$

$$y = (A - B) * \sin(t) - C * \sin((A - B) / B * t)$$

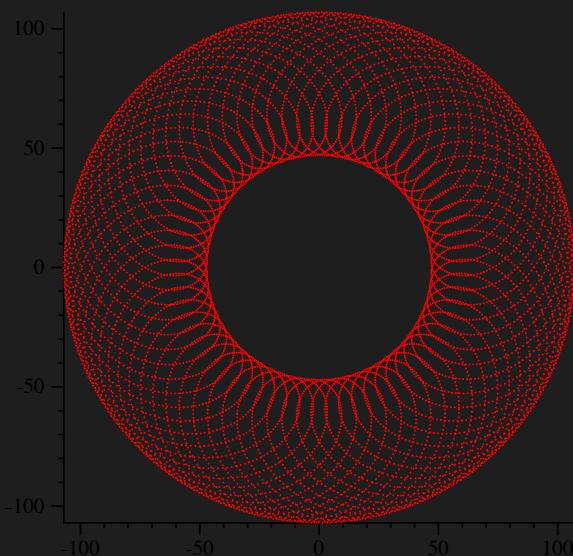
t is time, which is calculated in hypotro.cpp using an iteration of 10000 points.

The generator also takes color parameters r, g, b to change the color of the graph.

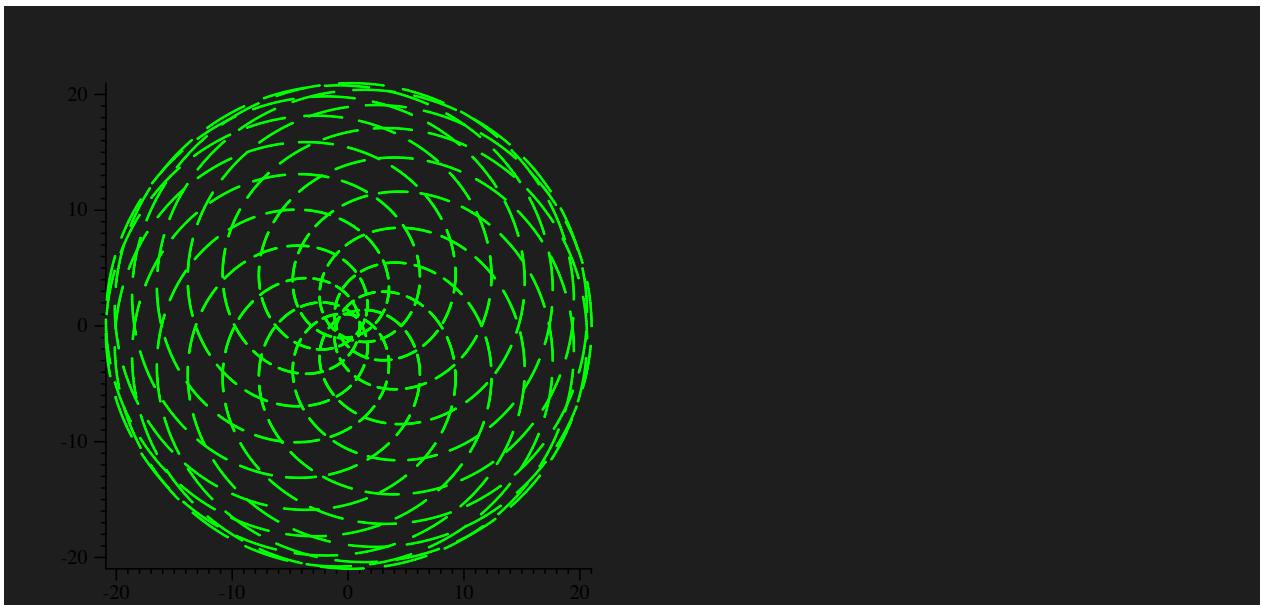
Usage: compile with g++ -g -o hypotro hypotro.cpp
./hypotro [A] [B] [C] [r] [g] [b] > hypotro.jgr --generate the points into a jgraph file
on a utk remote machine run: /home/jplank/bin/LINUX/jgraph -P hypotro.jgr | ps2pdf - [].pdf --generate a pdf of the graph in the current directory

Example files: To generate 5 example files, place hypotro.sh and hypotro.cpp in the same folder on a utk remote machine. Then run the following commands to get 5 example graphs downloaded to the current directory:

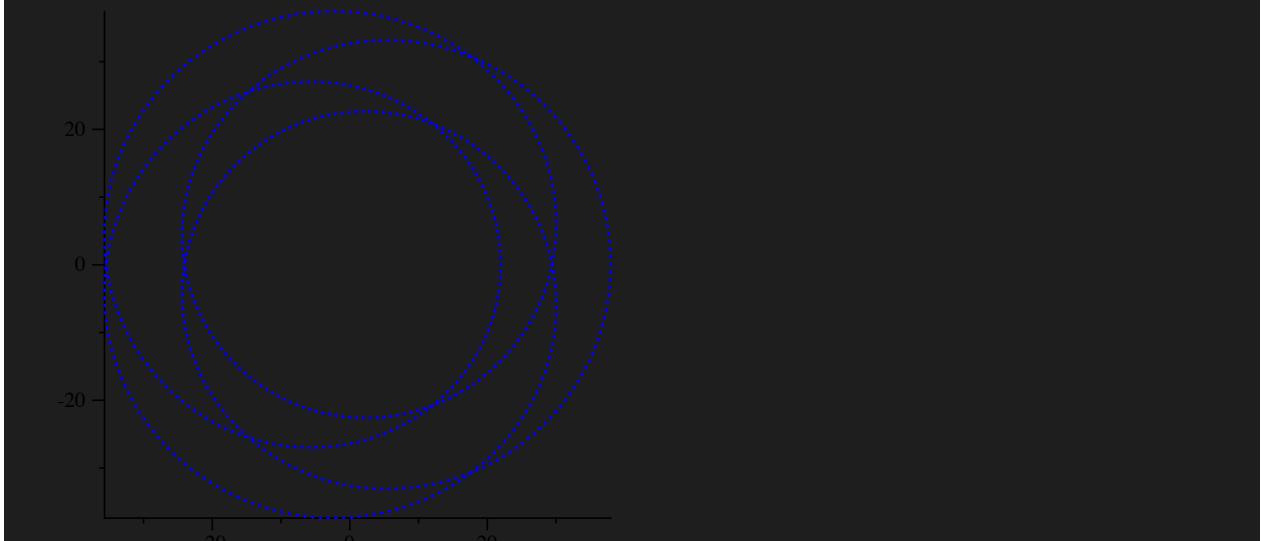
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chmod +x hypotro.sh --this changes the permissions of the bash file  
./hypotro.sh --this will compile and run hypotro.cpp and convert it's jgraph file into a graph
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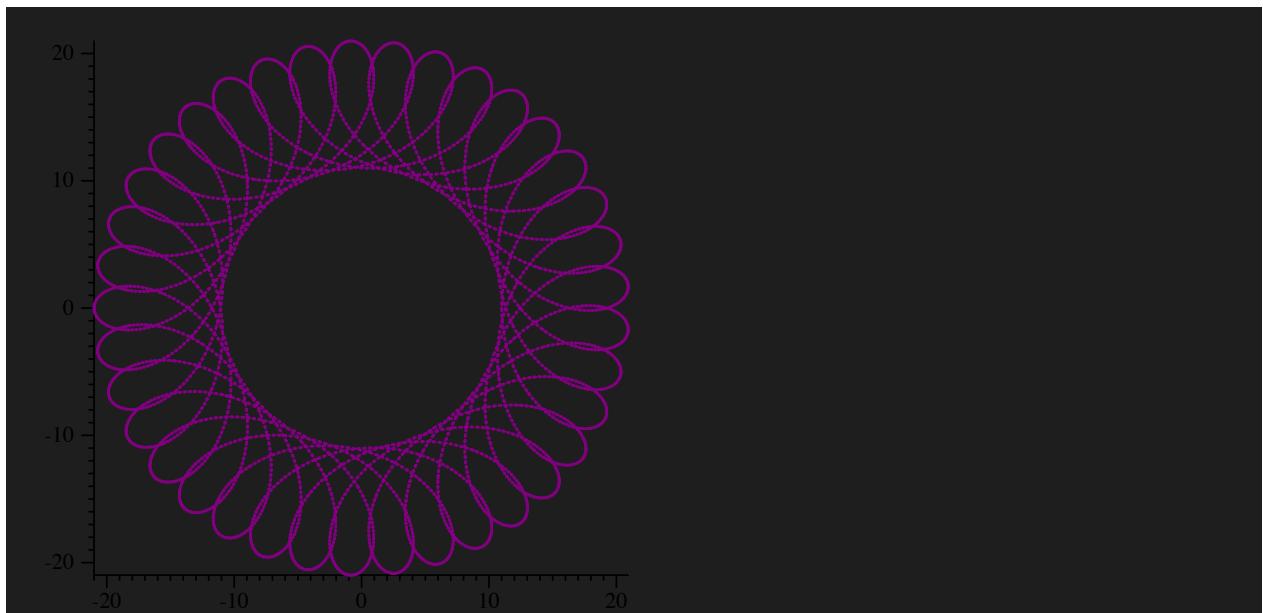
Created with: ./hypotro 90 13 30 1 0 0 > hypotro.jgr



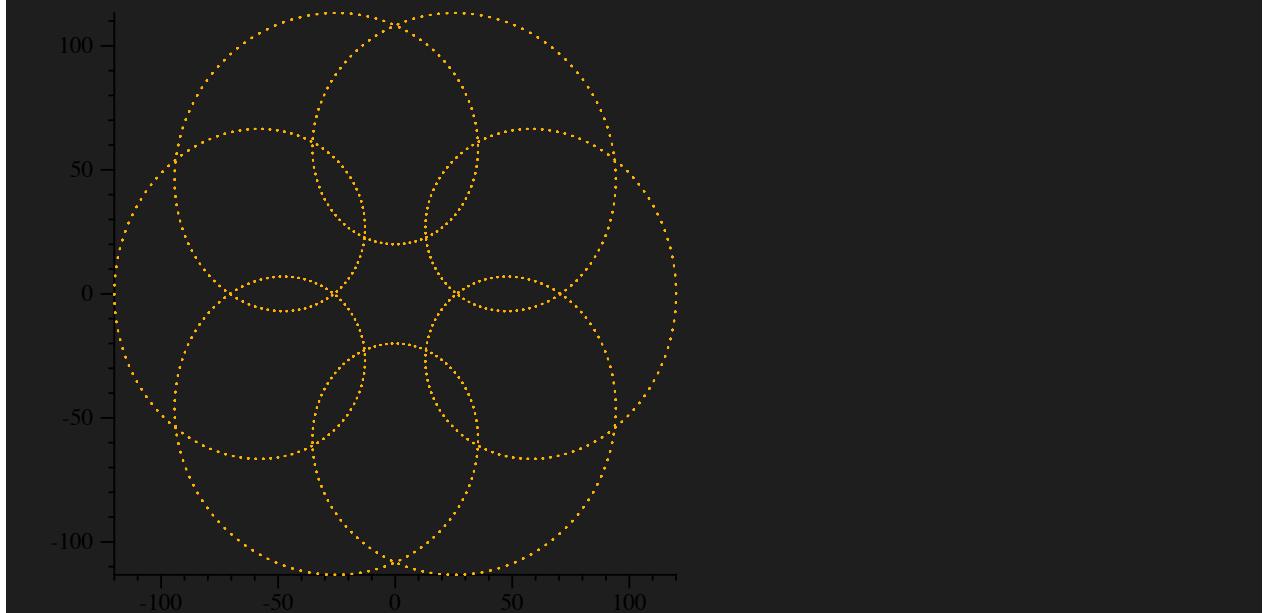
Created with: ./hypotro 31 20 10 0 1 0 > hypotro.jgr



Created with: ./hypotro 10 2 30 0 0 1 > hypotro.jgr



Created with: ./hypotro 27 32 16 0.5 0 0.5 > hypotro.jgr



Created with: ./hypotro 80 10 50 1 0.7 0 > hypotro.jgr