



## Days 7-9: Cornrow Curves by Adam Abrego 29Q498

### Overview

Students will use the website [csdt.rpi.edu](http://csdt.rpi.edu) to investigate the culture and history of cornrow braids. Using a standard design tool, students will create a cornrow braid pattern according to a verbal description. They will have to apply their knowledge of graphing to create the pattern in the design tool.

### Lesson Summary

#### Summary

Students will use guided notes to research the culture and history of cornrow braids. After a group discussion of their findings and the significance of the braids, they will be given time to work through the design tool tutorial and experiment with the design tool. To test their knowledge, they will be given a written description of a braid pattern and will have to recreate the pattern using the design tool.

#### Lesson Sequence

- Cultural background of cornrow braiding (15 minutes)
- Group discussion on cultural background of cornrow braiding (15 minutes)
- Cornrow curves design tool tutorial (80 minutes)
- Cornrow curves project (50 minutes)
- Gallery walk (5 minutes)

### CS Content

**Problem Solving** – Students get experience applying problem solving processes learned in previous lessons.

**Equity** – Multiple entry points to facilitate information acquisition

### Objectives

#### Students will be able to:

- Solve a problem by applying the problem solving process.
- Express a solution using standard design tools.
- Determine if a given solution successfully solves a stated problem.

### Materials and Prep

- Computers
- Internet access
- Access to [csdt.rpi.edu](http://csdt.rpi.edu)

### Resources

#### Student Documents

- Guided notes sheet for cultural and history research
- Google drive access for accessing assignment document and uploading image

### Assessments

- Completed guided notes
- Image of design created to match description in assignment document (rubric graded)

## Cornrow Braiding Assignment – Part One

Go to the website: [www.csdtrpt.edu](http://www.csdtrpt.edu)

Select: Cornrow Curves (under African American section)

Click on: History of Cornrow Braiding.

Read about the culture and history of cornrow braiding, taking notes on the following:

- African Origins
  
  
  
  
  
  
  
  
  
  
- Middle Passage
  
  
  
  
  
  
  
  
  
  
- Civil War to Civil Rights
  
  
  
  
  
  
  
  
  
  
- Hip Hop

Prepare to discuss.

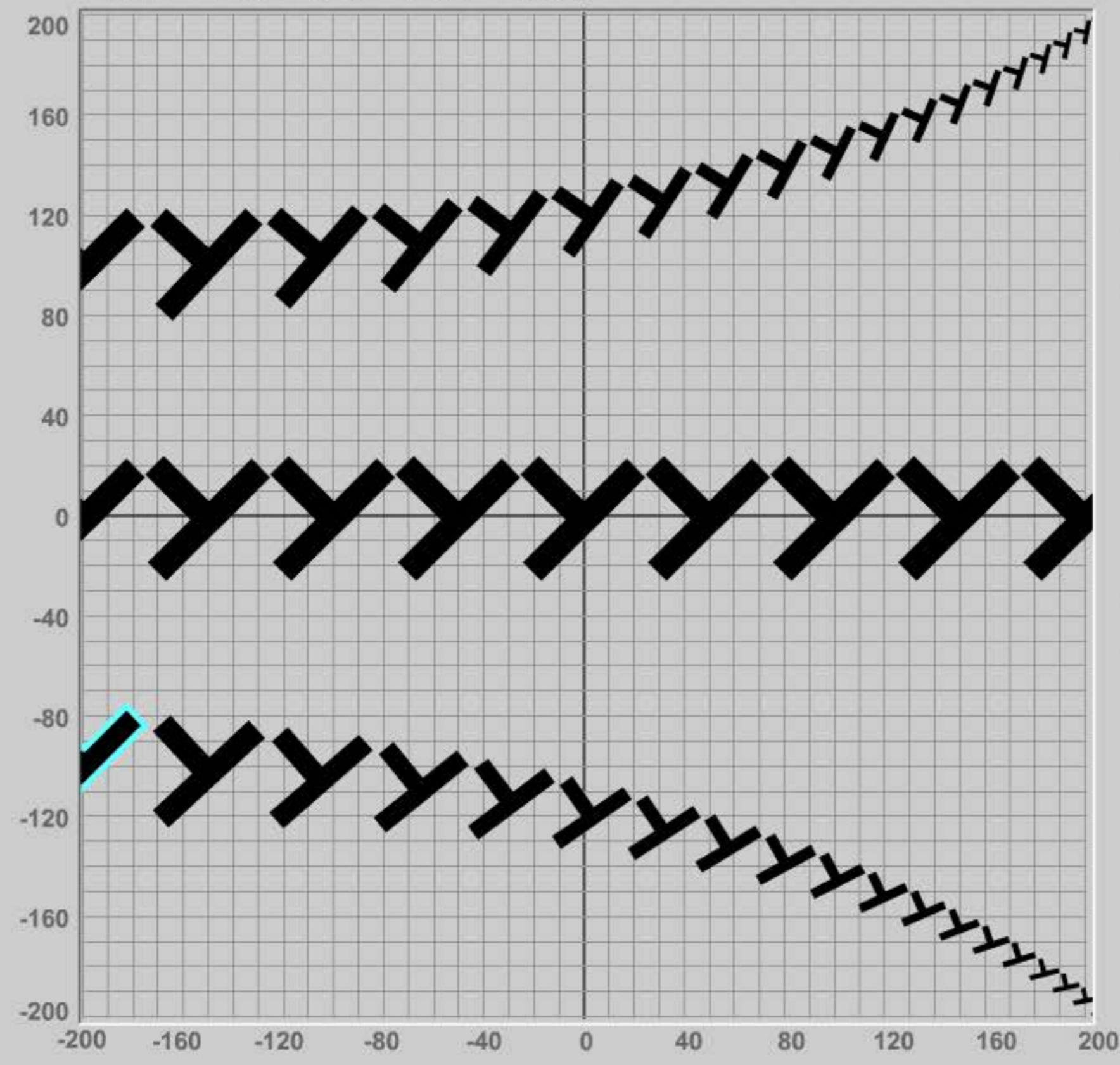
### Cornrow Braid Challenge 1

- 1) Create a braid pattern that starts on the left side on the x-axis. Braid must extend to the right side, staying on the x-axis.
- 2) Add a second braid that starts halfway between the x-axis and the top, on the left side of the grid. This braid has to curve up to upper right corner and get smaller as it goes, so it is disappearing in the upper right corner.
- 3) Add a third braid that starts halfway between the x-axis and the bottom, on the left side of the grid. This braid has to curve down to lower right corner and get smaller as it goes, so it is disappearing in lower right corner.

### Cornrow Braid Challenge 2

- 1) Create a braid pattern that starts on the top on the y-axis. Braid must extend down to the bottom, staying on the y-axis.
- 2) Add a second braid that starts halfway between the y-axis and the left side, at the top of the grid. This braid has to curve down to the lower left corner and get smaller as it goes, so it is disappearing in the lower left corner.
- 3) Add a third braid that starts halfway between the y-axis and the right side, on the top of the grid. This braid has to curve down to lower right corner and get smaller as it goes, so it is disappearing in lower right corner.

Save Open New Print Options



### Cornrow Curves Software

Enter Number of Plaits:

Iterate (integer)

Define Starting Parameters:

Starting Point (X,Y) X=  Y=

Starting Angle (degree)

Starting Dilation (percent)

Starting Reflection  X  Y

Define Iteration Parameters:

Translate (percent)

Rotate (degrees)

Dilate (percent)

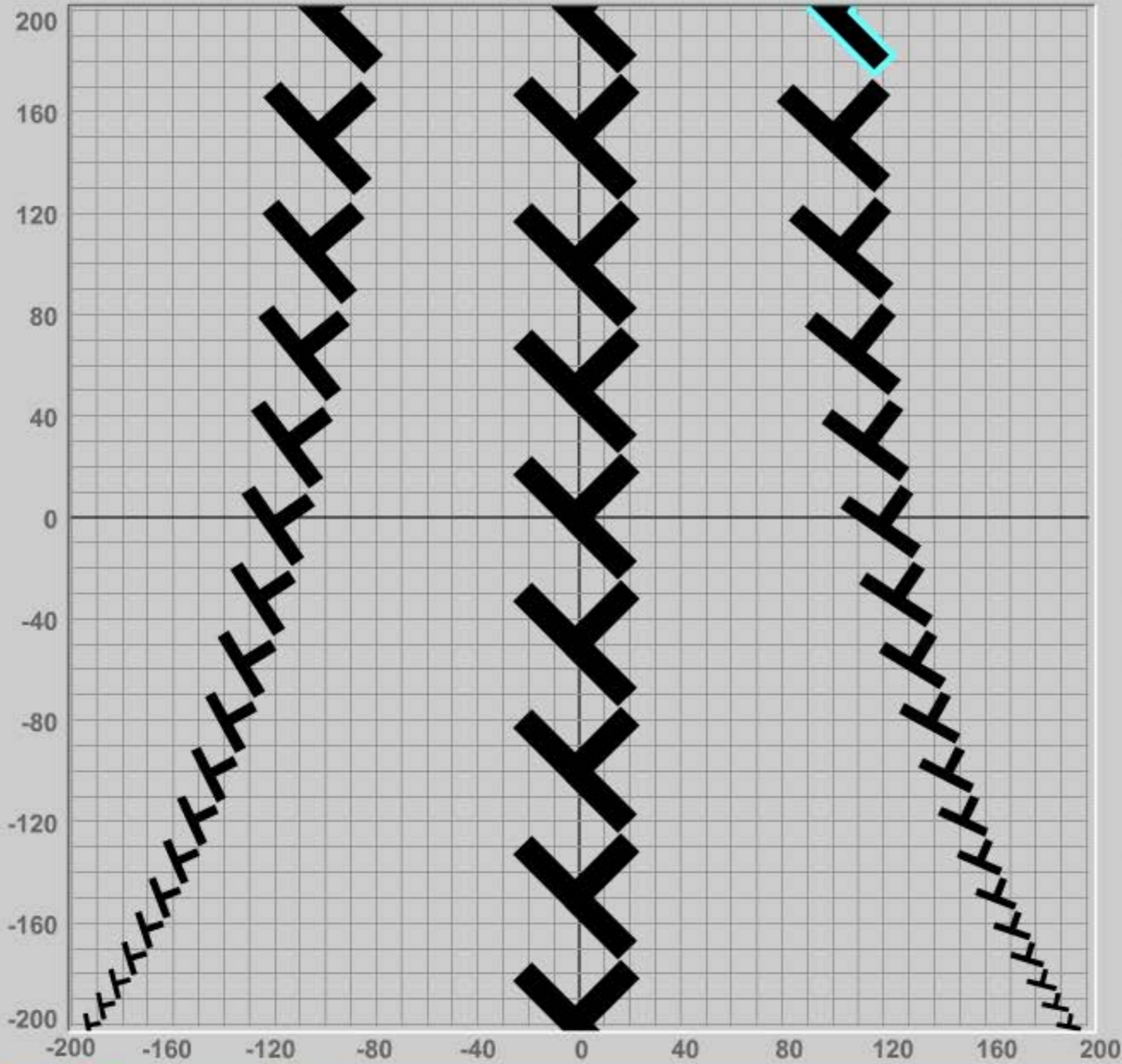


ADD BRAID

DELETE current braid

RESET current braid

Save Open New Print Options



### Cornrow Curves Software

Enter Number of Plaits:

Iterate (integer)

Define Starting Parameters:

Starting Point (X,Y) X=   
Y=

Starting Angle (degree)

Starting Dilation (percent)

Starting Reflection  X  Y

Define Iteration Parameters:

Translate (percent)

Rotate (degrees)

Dilate (percent)



ADD BRAID

DELETE current braid

RESET current braid