

# activity sheet 2

Name \_\_\_\_\_

## ANIMATING TRAINS

To see another representation of the movement of the trains, follow these steps, and relate what you see back to the original question.

1. Press the MODE button to get the screen below:

- Change from “FUNC” to “PAR” for parametric mode
- Change “SEQUENTIAL” to “SIMUL” for simultaneous graphing.

2. Press the  $Y=$  button to enter your equations (the calculator may use T instead of x):

- Enter your expression for train 1 into  $X_{1T}$ .
- Enter your expression for train 2 into  $X_{2T}$ .
- Let  $Y_{1T} = 1$ , and  $Y_{2T} = 2$ . (These are the tracks for each train.)

3. Press the WINDOW button:

- Since T represents the hours passed, its minimum value (Tmin) will be \_\_\_\_\_.
- The maximum value (Tmax) will be \_\_\_\_\_.
- Set Tstep = 1.

4. X measures the distance traveled:

- Its minimum value (Xmin) will be \_\_\_\_\_.
- Its maximum value (Xmax) will be \_\_\_\_\_.
- Choose Xscl = 50.

5. Y represents the track number:

- Set Ymin to 0, and Ymax to 3, so that the two tracks, 1 and 2, are easily visible.
- Choose Yscl = 1.

6. Press the GRAPH button. Which train appears to get to the far right of the screen first, train 1 or train 2? \_\_\_\_\_

7. Change the value of the Tstep so that the trains travel more slowly across the screen. Which train appears to be traveling 750 miles the fastest? \_\_\_\_\_

8. Confirm your guess by solving an appropriate equation or equations. Which train will arrive in Atlanta first? \_\_\_\_\_

