

Follow the steps and answer any questions along the way.

1) Click on the STAT button of your TI 84

2) Select "Edit".



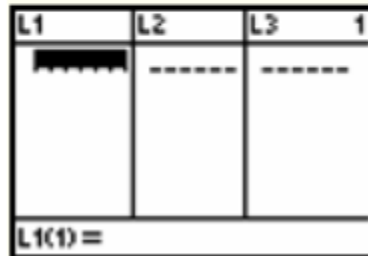
3) Fill in the chart below into the lists:

List 1: Year*

List 2: Men's Time

List 3: Women's Time

Winning Times for the Olympic 400 meter Dash

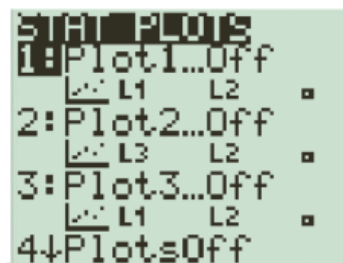


Year	0	4	8	12	16	20	24	28	32
Men's Time	43.86	44.66	44.26	44.60	44.27	43.87	43.50	43.49	43.84
Women's Time	52.03	51.08	49.29	48.88	48.83	48.65	48.83	48.25	49.11

*Note the years are numerated started at 1968. For example, 1968, enter 0
1972 -enter 4 1976 – enter 8etc...

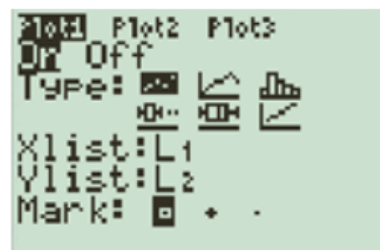
4) Press 2nd **STAT PLOT** (Y= button)

a) Select Plot1



b) Make screen look like the one on the right.

-to write L₂, select 2nd **STAT** and scroll to ENTER L₂



5) Press 2nd **STAT PLOT** again

a) Do the same with Plot2 except change L₂ for the y-list to L₃

b) 2nd **QUIT** (MODE button)



6) Press **WINDOW**

a) Make all settings like the right screen.

```
WINDOW
Xmin=0
Xmax=120
Xscl=1
Ymin=0
Ymax=55
Yscl=1
Xres=1
```

7) Press **GRAPH**

What do you notice about the data for men's vs. women's plots?

Include Correlation, etc..?

_____ (5 points)

8) Complete the following

The line of best fit for men is $y = -0.02433x + 44.43$, press **Y=** and place your cursor on the first line and type in.

The line of best fit for women is $y = -0.08883x + 50.86$, press **Y=** and place your cursor on the second line and type in.

Press **GRAPH**.

-What do you notice about the two lines? Increasing, decreasing, correlation, etc...?

_____ (5 points)

9) Where do the two lines intersect?

- Press 2nd **CALC** (TRACE button)

- Scroll to press "intersect"

- Intersect: For, "First Curve" Click Enter on your Y1 graph

Then for "Second Curve" scroll to the other side of the intersection and click Enter twice.

- What are the x and y values (the coordinate of intersection): (_____ , _____) (2 points)

- What is the "real-world" meaning of the intersection point? What does x represent? What does y represent?

_____ (8 points)