

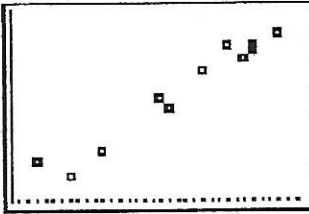
Line of best fit

Can we predict the number of total calories based upon the total fat grams?

1. Enter the data in the calculator lists. Place the data in L₁ and L₂.
STAT, #1Edit, type values into the lists

L1	L2	L3	3
9	260		
13	320		
21	420		
30	530		
31	560		
31	550		
34	590		
L3(1)=			

2. Prepare a scatter plot of the data. Set up for the scatterplot.
2nd StatPlot - choices shown at right.
Choose ZOOM #9 ZoomStat. Graph shown below.



```

2nd StatPlot Plot2 Plot3
Off
Type: [ ] [ ] [ ]
Xlist: L1
Ylist: L2
Mark: [ ] [ ]
    
```

3. Have the calculator determine the line of best fit.

STAT → CALC #4 LinReg(ax+b)

Include the parameters L₁, L₂, Y₁.
(Y₁ comes from VARS → YVARS, #Function, Y₁)

```

LinReg(ax+b) L1,
L2, Y1
    
```

You now have the values of a and b needed to write the equation of the line of best fit. See values at the right.

$$y = 11.73128088x + 193.8521475$$

```

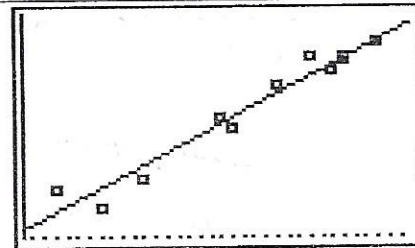
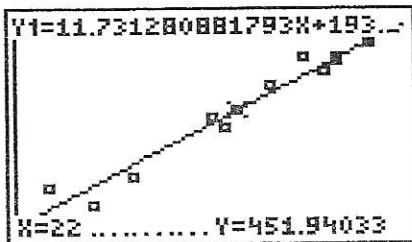
EDIT [ ] TESTS
1: 1-Var Stats
2: 2-Var Stats
3: Med-Med
4: LinReg(ax+b)
5: QuadReg
6: CubicReg
7: QuartReg
    
```

```

LinReg
y= ax+b
a=11.73128088
b=193.8521475
r^2=.9498583012
r=.9746067418
    
```

4. Graph the line of best fit.

Simply hit GRAPH. To get a predicted value within the window, hit TRACE, up arrow, and type the desired value.



Question: Predict the total calories based upon 22 grams of fat.

ANS: 451.940 calories

↑ up arrow
or graph

CALC Steps →

Make sure you move cursor to y=

[y=] → [VARS/STATS] → EQ [1: Reg EQ] ZOOM [9: ZoomStat]