Editor - C:\Users\Ivani\Desktop\534\hw5.m

hw5.m ✕ hw4.m ✕ +

```matlab
 1      Z=csvread('Cereals no alpha.csv');
 2      [rows,cols]=size(Z);
 3      disp([rows,cols])
 4      sugar=Z(:,7);
 5      fiber=Z(:,5);
 6      rating=Z(:,13);
 7      sodium=Z(:,4);
 8
 9      [b0,b1,b2,rsq,s,F,StdRes] = linfit2D(sodium,fiber,rating);
10      disp(["b0:", b0,"b1:", b1,"b2:", b2, "r^2:", rsq, "s:", s, "F:", F])
11
12      fit=b0+b1*sodium+b2*fiber;
13      plot(fit,StdRes,'*')
14      xlabel('Fitted Values');
15      ylabel('Standard Residuals');
16      title('Standard Residuals vs. Fit');
17
18      pptdist=1.996;
19      [db1,db2,dypbar,dypran] = inference2D(sodium,fiber,s,pptdist);
20      disp(["db1:", db1,"db2:", db2,"dypbar:", dypbar, "dypran:", dypran])
21
22      b1p=b1+db1;
```

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```matlab
21
22      b1p=b1+db1;
23      b1m=b1-db1;
24      disp(["b1:", b1, "b1p:", b1p, "b1m:", b1m])
25
26      b2p=b2+db2;
27      b2m=b2-db2;
28      disp(["b2:",b2, "b2p:", b2p, "b2m:", b2m])
29
30      xp1=200;
31      xp2=5;
32
33      yp=b0+b1*xp1+b2*xp2;
34      ypbarp=yp+dypbar;
35      ypbarm=yp-dypbar;
36      ypranp=yp+dypran;
37      ypranm=yp-dypran;
38
39      disp(["yp:", yp, "ypbarp:", ypbarp, "ypbarm:", ypbarm, "ypranp:", ypranp, "ypranm:", ypranm])
40
```

New to MATLAB? See resources for Getting Started.

```
>> hw5
    77     20

  Columns 1 through 11

    "b0:"    "45.2616"    "b1:"    "-0.060628"    "b2:"    "3.2923"    "r^2:"    "0.4715"    "s:"    "10.3492"    "F:"

  Column 12

    "33.0096"

    "db1:"    "0.028265"    "db2:"    "0.99419"    "dypbar:"    "2.3541"    "dypran:"    "20.7906"

    "b1:"    "-0.060628"    "b1p:"    "-0.032363"    "b1m:"    "-0.088892"

    "b2:"    "3.2923"    "b2p:"    "4.2865"    "b2m:"    "2.2981"

  Columns 1 through 9

    "yp:"    "49.5975"    "ypbarp:"    "51.9515"    "ypbarm:"    "47.2434"    "ypranp:"    "70.3881"    "ypranm:"

  Column 10

    "28.8068"
```


Standard Residuals vs. Fit