Congratulations! You passed!

TO PASS 80% or higher

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Practice - Using PROC REG to Fit a Simple Linear Regression Model

TOTAL POINTS 3

1. Using the **bodyfat2** data set, perform a simple linear regression model. **1 / 1 point**

   - Perform a simple linear regression model with **PctBodyFat2** as the response variable and **Weight** as the predictor.

   What is the value of the *F* statistic and the associated *p*-value? How would you interpret this in connection with the null hypothesis?

150.03, .001

Correct

The value of the *F* statistic is 150.03 and the *p*-value is <.001. Therefore, you would reject the null hypothesis of no relationship, or a zero slope for **Weight**.

```
1   /*st102s04.sas*/
2
3   ods graphics on;
4
5   proc reg data=STAT1.BodyFat2;
6      model PctBodyFat2=Weight;
7      title "Regression of % Body Fat on Weight";
8   run;
9   quit;
10
11  title;
12
```

2. Write the predicted regression equation. **1 / 1 point**

y = -12.05158+ 0.17439(weight

Correct

The prediction regression equation is:

PctBodyFat2 = -12.05158 + 0.17439 * **Weight**.

3. What is the value of R-square? How would you interpret this? **1 / 1 point**

0.3751

moderate positive correlation

Correct

The R-square value of 0.3751 can be interpreted to mean that 37.51% of the variability in **PctBodyFat2** can be explained by **Weight**.