

You are taking "Final Exam" as a timed exam. The timer on the right shows the time remaining in the exam. To receive credit for problems, you must select "Submit" for each problem before you select "End My Exam".

End My Exam3:07:27

[Course](#) > [Week 12: Final Exam](#) > [Final Exam](#) > Problem 4/4

## Problem 4/4

Checkboxes.

9/9 points (graded)

Can It! is can manufacturing company. They produce two types of cans: cans for preserves and cans for carbonated drinks. They obtained a sample of the monthly revenue during the past 12 months given in the table below:

| Month | Revenue |
|-------|---------|
| 1     | 8053    |
| 2     | 4732    |
| 3     | 5684    |
| 4     | 7926    |
| 5     | 5318    |
| 6     | 6947    |
| 7     | 6284    |
| 8     | 4892    |
| 9     | 5936    |
| 10    | 5241    |
| 11    | 6731    |
| 12    | 7093    |

Select all correct answers.

- ☒ Based on the given data, the average monthly revenue of Can It! is 6236 dollars.
- ☐ Based on the given data, the average monthly revenue of Can It! is 6110 dollars

☐ The standard deviation for the given data is 3321.

☒ The standard deviation for the given data is 1126.

☐ None of the above.



Submit

You have used 1 of 2 attempts

✓ Correct (9/9 points)

## Checkboxes.

9/9 points (graded)

In SC0x you have learned about regression, and more specifically linear regression.

Select all correct answers.

☒ In a linear regression model, I can have only one dependent variable.

☐ In a linear regression model, independent variables will always be binary variables.

☐ In a linear regression model, all variables have to be continuous.

☐ In a linear regression model, the  $R^2$  value provides information about how much of the variance in my independent variable is my model explaining.

☒ In a linear regression model, I can have several independent variables.

☒ In a linear regression model, the  $R^2$  value provides information about how much of the variance in my dependent variable is my model explaining.

☐ None of the above.



Submit

You have used 2 of 2 attempts

✓ Correct (9/9 points)

Checkboxes.

9/9 points (graded)

Christmas is almost here! "Toy and Joy", a toy company based in Indonesia, has planned the launch of a new toy: the Smiley Doll. The profit equation for the Smiley Doll product can be expressed as a function of its price

$$profit = -70p^2 + 5000p + 70000$$

At which price should "Toy and Joy" sell each Smiley Doll in order to maximize profits?

☐ They should sell Smiley Dolls at \$83.4 per unit.

☐ They should sell Smiley Dolls at \$140 per unit.

☒ They should sell Smiley Dolls at \$35.7 per unit.

☐ They should sell Smiley Dolls at \$50 per unit.

☐ None of the above.



Submit

You have used 1 of 2 attempts

✓ Correct (9/9 points)

Checkboxes.

9/9 points (graded)

Helen works at a small bakery. Her customers arrivals per hour follow a Poisson distribution with a mean of 5.

What is the probability that at least 4 customers visit the bakery during the next hour?

- ☐ 44%
- ☐ 56%
- ☐ 17.5%
- ☐ 82.5%
- ☒ 73.5%
- ☐ 26.5%
- ☐ None of the above.



Submit

You have used 1 of 2 attempts

✓ Correct (9/9 points)

Checkboxes.

9/9 points (graded)  
In a linear programming model...  
Select all correct answers.

- ☒ The objective function is always linear.
- ☒ The optimal solution should be part of the feasible region.
- ☐ The constraints can be represented as quadratic equations.
- ☒ With an LP you can find the cost optimal production plan subject to a number of linear constraints.

☐ None of the above.



Submit

You have used 1 of 2 attempts



✓ Correct (9/9 points)