

✔ Congratulations! You passed!

Grade received 100% To pass 80% or higher

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1. What is the area surrounding a regression line, which describes the uncertainty around the predicted outcome at every value of X ?

1 / 1 point

- ☐ R squared
- ☒ Confidence band
- ☐ Ordinary least squares
- ☐ Confidence interval

✔ Correct

The confidence band is the area surrounding a regression line, which describes the uncertainty around the predicted outcome at every value of X . The confidence band reveals the confidence interval for each point on a regression line.

2. Fill in the blank: R squared measures the _____ in the dependent variable, Y , that is explained by the independent variable, X .

1 / 1 point

- ☐ coefficient of accuracy
- ☐ proportion of accuracy
- ☐ coefficient of variation
- ☒ proportion of variation

✔ Correct

R squared measures the proportion of variation in the dependent variable, Y , that is explained by the independent variable, X . It is calculated by subtracting the sum of squared residuals (explained variance) divided by the total variance from 1.

3. Which linear regression evaluation metric is sensitive to large errors?

1 / 1 point

- ☐ Mean absolute error (MAE)
- ☒ Mean squared error (MSE)
- ☐ Adjusted R squared
- ☐ The coefficient of determination

✔ Correct

Mean squared error (MSE) is sensitive to large errors. The MSE is the average of the squared difference between the predicted and actual values.