How to use Microsoft Excel: regression analysis

Physics 23 Lab

Missouri University of Science and Technology
Data tab

![Excel data tab screen](image)

- Home
- Insert
- Page Layout
- Formulas
- Review
- View

Get External Data

- From Access
- From Web
- From Text
- From Other Sources
- Existing Connections

Connections

- Refresh
- Properties
- Edit Links

Chart 3

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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Data analysis

How to use Excel

Regression
Regression

How to use Excel regression

[Image of Excel interface with Data Analysis dialog box open, showing Regression selected]
Regression $x, y$

[Diagram of Excel regression tool with a chart showing a line with the equation $y = -50x + 206$.]
Regression output range

![Regression output range in Excel](image)

- **Input Y Range:** $C2:C3$
- **Input X Range:** $B2:B3$

**Output options**

- **Output Range:**
- **New Worksheet Ply:**
- **New Workbook**

**Residuals**

- Residuals
- Standardized Residuals

**Normal Probability**

- Normal Probability Plots
Regression: OK

The image shows a graph with data points and a regression line $y = -5x + 20b$. The Excel regression dialog box is open, with the following settings:

**Input**
- Input Y Range: $C2:C3$
- Input X Range: $B2:B3$
- Labels: unchecked
- Constant is Zero: unchecked
- Confidence Level: 95%

**Output options**
- Output Range: Sheet1!D18
- Residuals: unchecked
- Standardized Residuals: unchecked
- Residual Plots: unchecked
- Line Fit Plots: unchecked
- Normal Probability: unchecked
- Normal Probability Plots: unchecked

The OK button is highlighted, indicating the user is about to confirm the settings.
Regression: Standard error

**SUMMARY OUTPUT**

**Regression Statistics**
- Multiple R: 0.904194
- R Square: 0.817568
- Adjusted R Square: 0.635135
- Standard Error: 0.60404
- Observations: 3

**ANOVA**

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<th>MS</th>
<th>F</th>
<th>Significance F</th>
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**Coefficients**

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