The data in the table below shows the number E (in thousands) of employees in the cellular communications industry in the US from 2002 to 2007.

Year	Employees (thousands)
2002	192
2003	206
2004	226
2005	233
2006	254
2007	267

Line of Best Fit
*Fitting a linear models to best represent the relationship described by a scatter plot.
* You can do this by finding the equation that passes through two points.

Ex. 1 Find a linear model that relates the year to the number of employees in the cellular industry in the US.

Cellular Telecommunications Industry

Year (2 ↔ 2002)
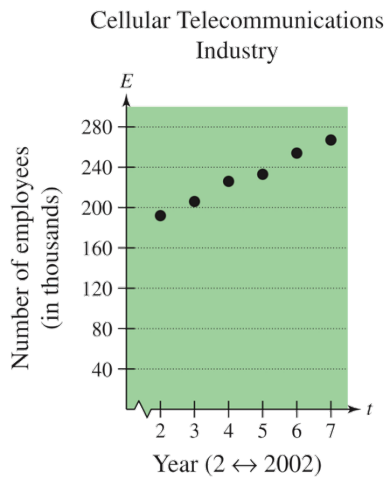
Note Once you have found a model, you can determine how well it fits by comparing the actual values with the values given by the model.

t	2	3	4	5	6	7
Actual E	192	206	226	233	254	267
Model E						

Residual

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Least Squared Regression (Linear Regression)
https://www.youtube.com/watch?v=jEEJNz0RK4Q

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Correlation Coefficient
* When you use a regression feature, you may get an r-value.
* This is called the correlation coefficient.
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Ex. 2 What do you think r is?

Ex. 3 Open the CODAP file Manatee Deaths and analyze the data using motorboat registrations as the independent variable and deaths as the dependent variable.

Model:

Analysis:

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| **Steps to calculating r² in CODAP** |
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