Regressions

Class	Algebra 2

Least Square Regression Line (LSRL) → values in a table and make a *line of best fit* ($\hat{y} = mx + b$)

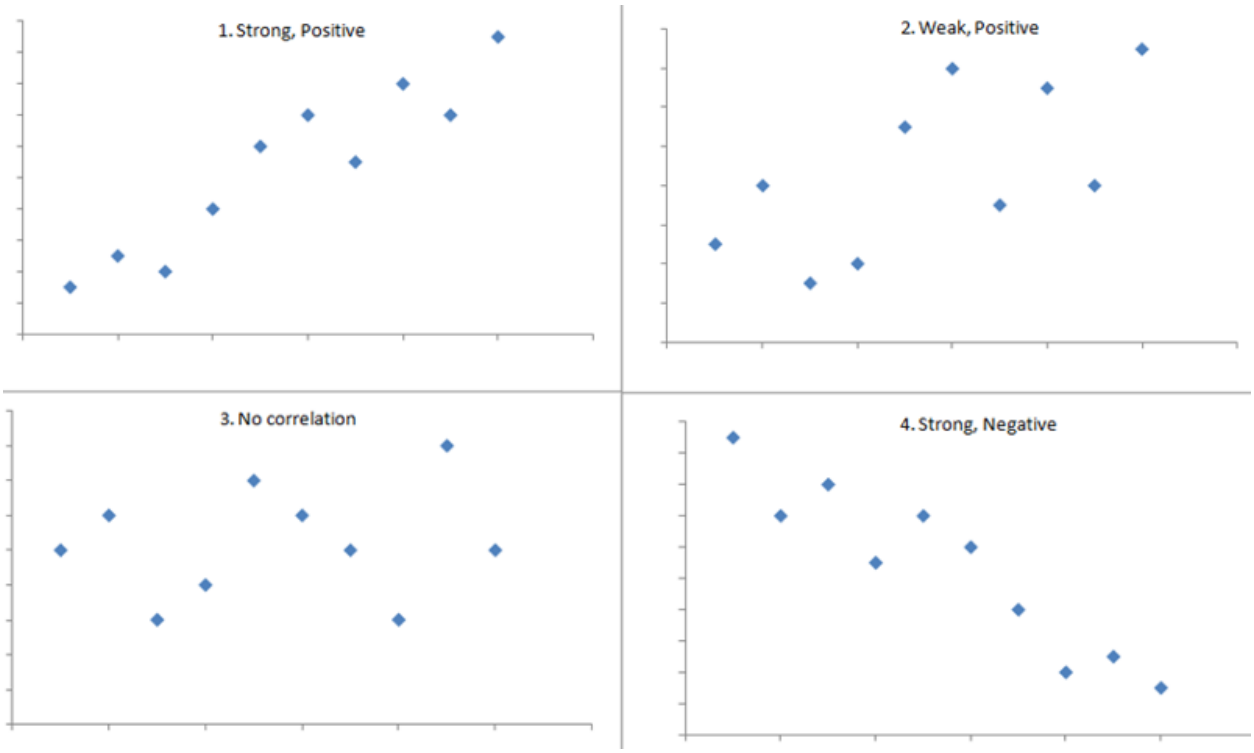
- Minimizes the **sum of square errors (SSE)**
- **Residual:** amount overestimated or underestimated from the **ACTUAL** value
  - Vertical distance that a point on a scatterplot is from the LSRL

The sum of the residuals is **ALWAYS** 0.

> If the line of best fit is **UNDERESTIMATING**, the residual for the value is **POSITIVE.**
>
> If the line of best fit is **OVERESTIMATING**, the residual for the value if **NEGATIVE**.

If the graph of the residuals has no pattern, the line of best fit is a good fit.

Examples of Correlation:


1. Strong, Positive
2. Weak, Positive
3. No correlation
4. Strong, Negative