“Simple Linear Regression”

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- *Introduce the concept of Simple Linear Regression.*

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Simple Linear Regression is used to estimate the relationship between one independent variable and one dependent variable.

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Also

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In Simple Linear Regression, one independent variable predicts the value of dependent variable.

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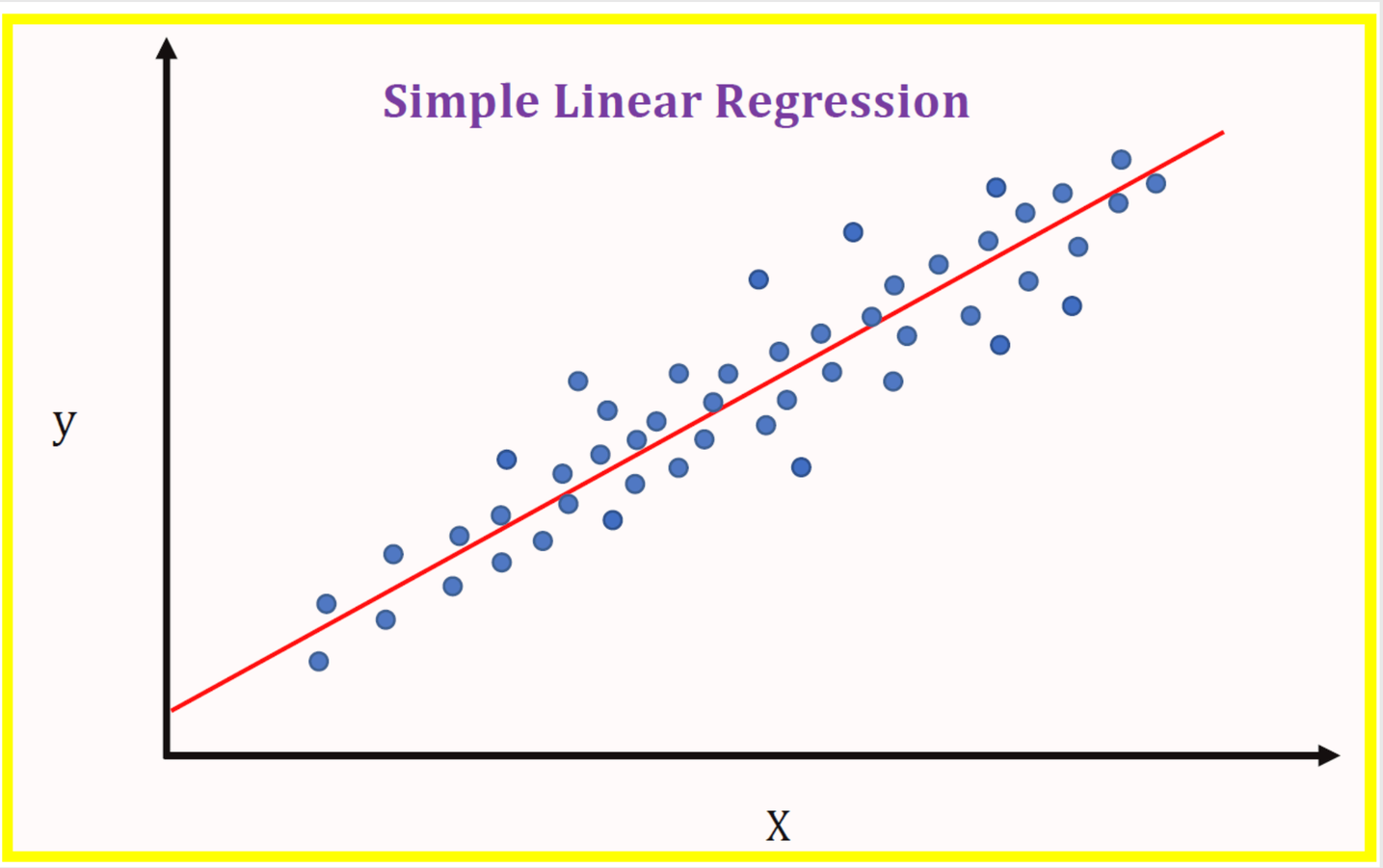
The goal of simple linear regression is to find a straight line that “best fits” the observed data points. This line represents the relationship between:
The predictor (Independent) variable and response (Dependent) variable.

“Simple Linear Regression”



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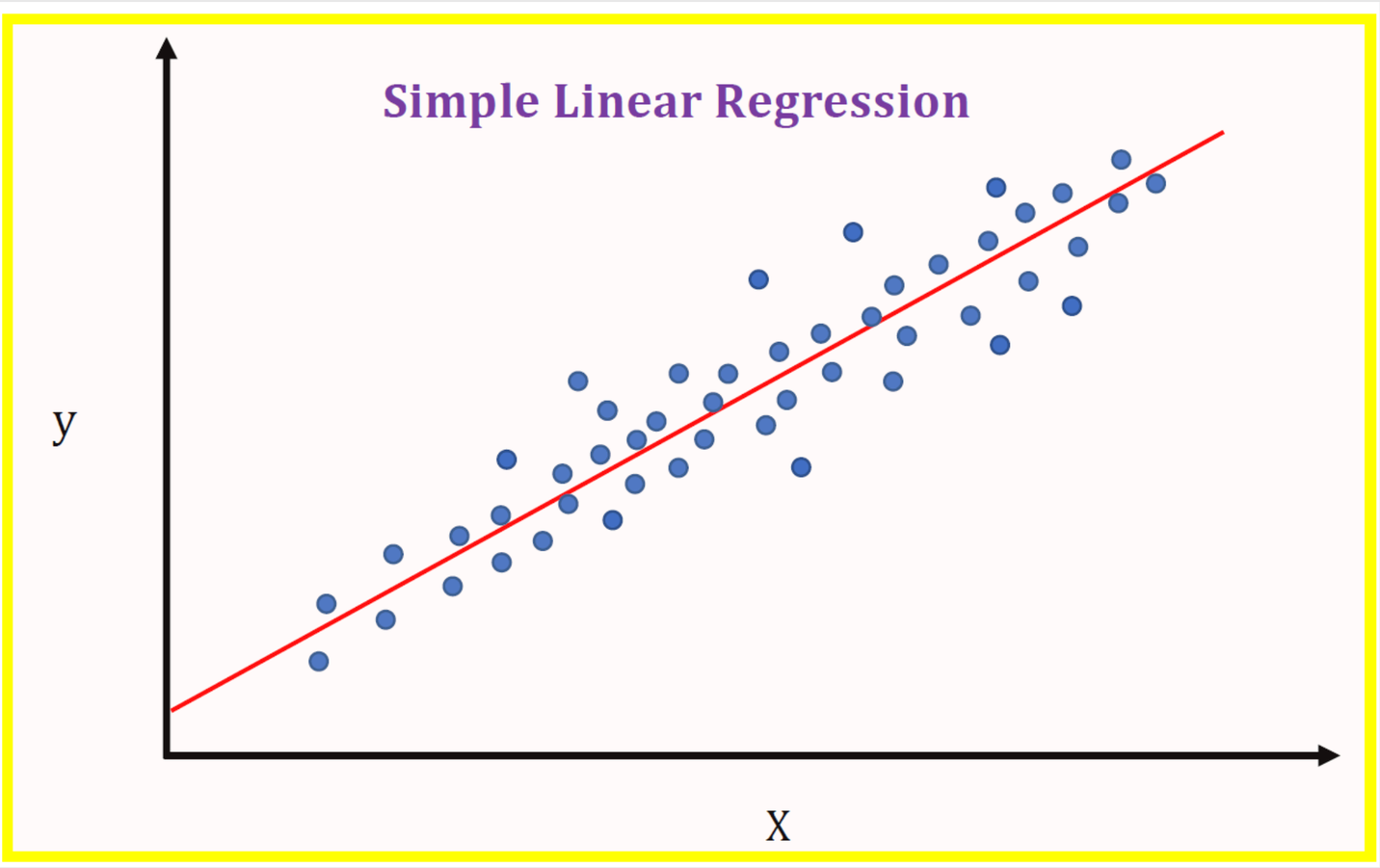

The equation for this line is:

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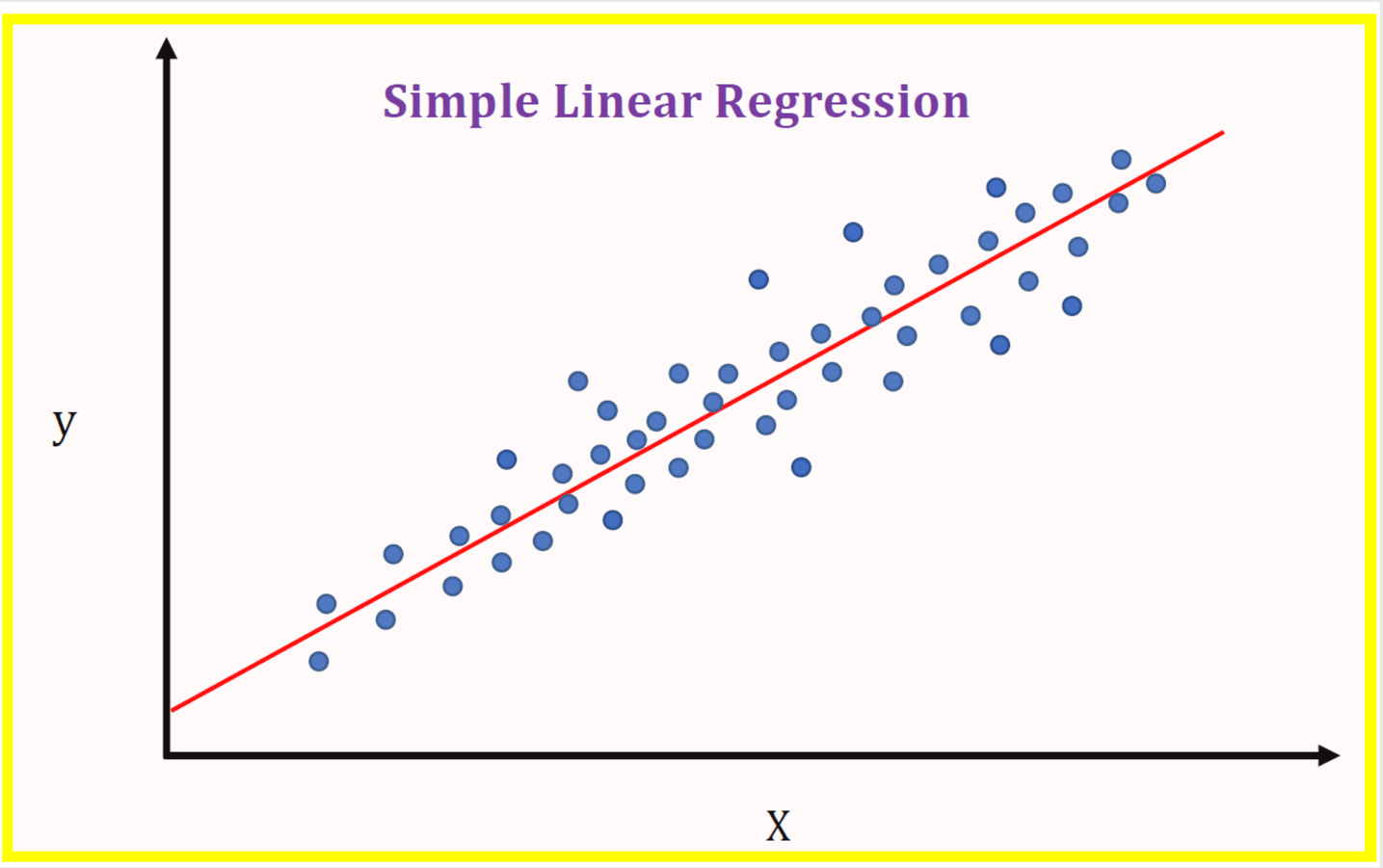

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$$y = \beta 0 + \beta 1\, x + \varepsilon$$

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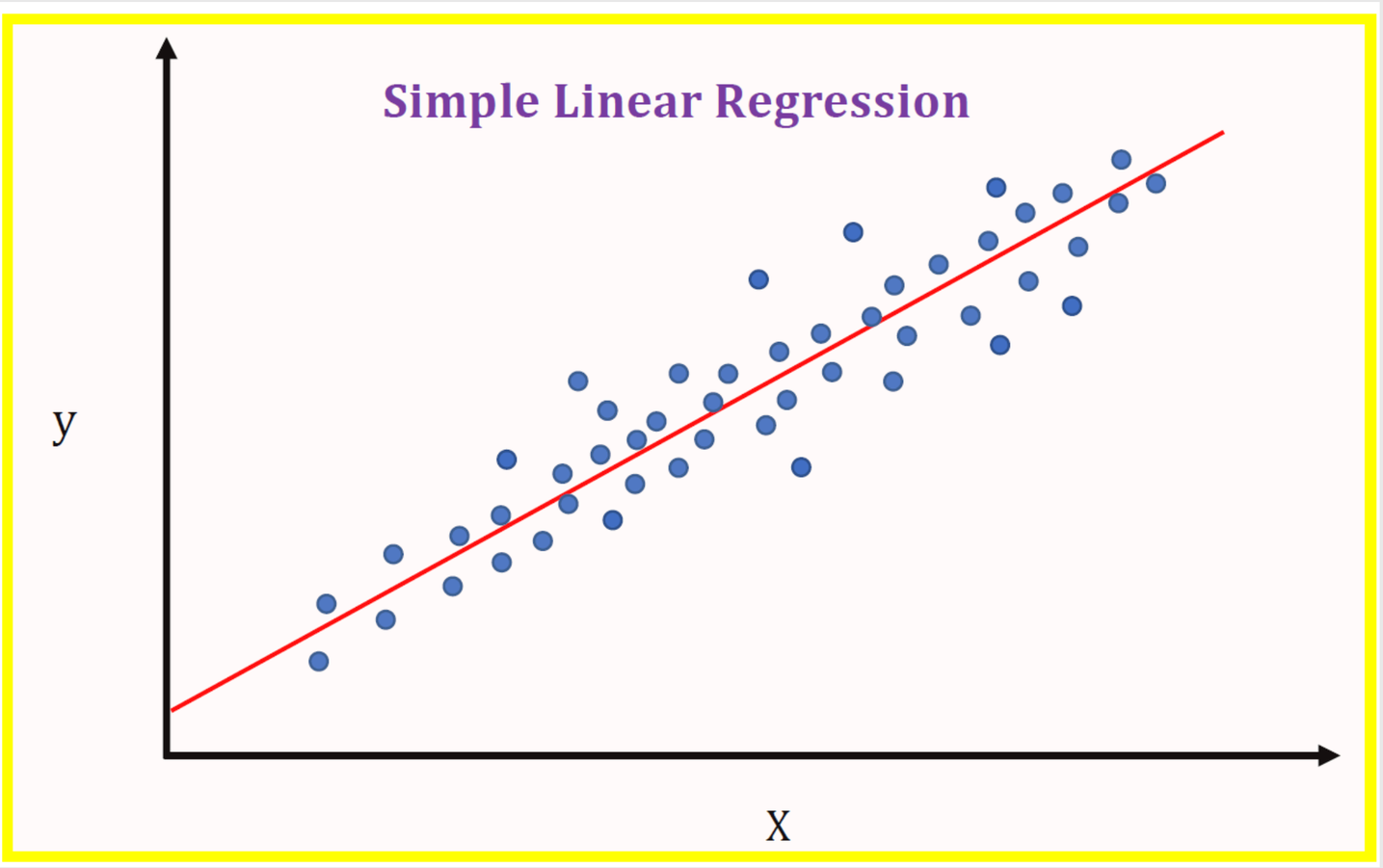

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Where:

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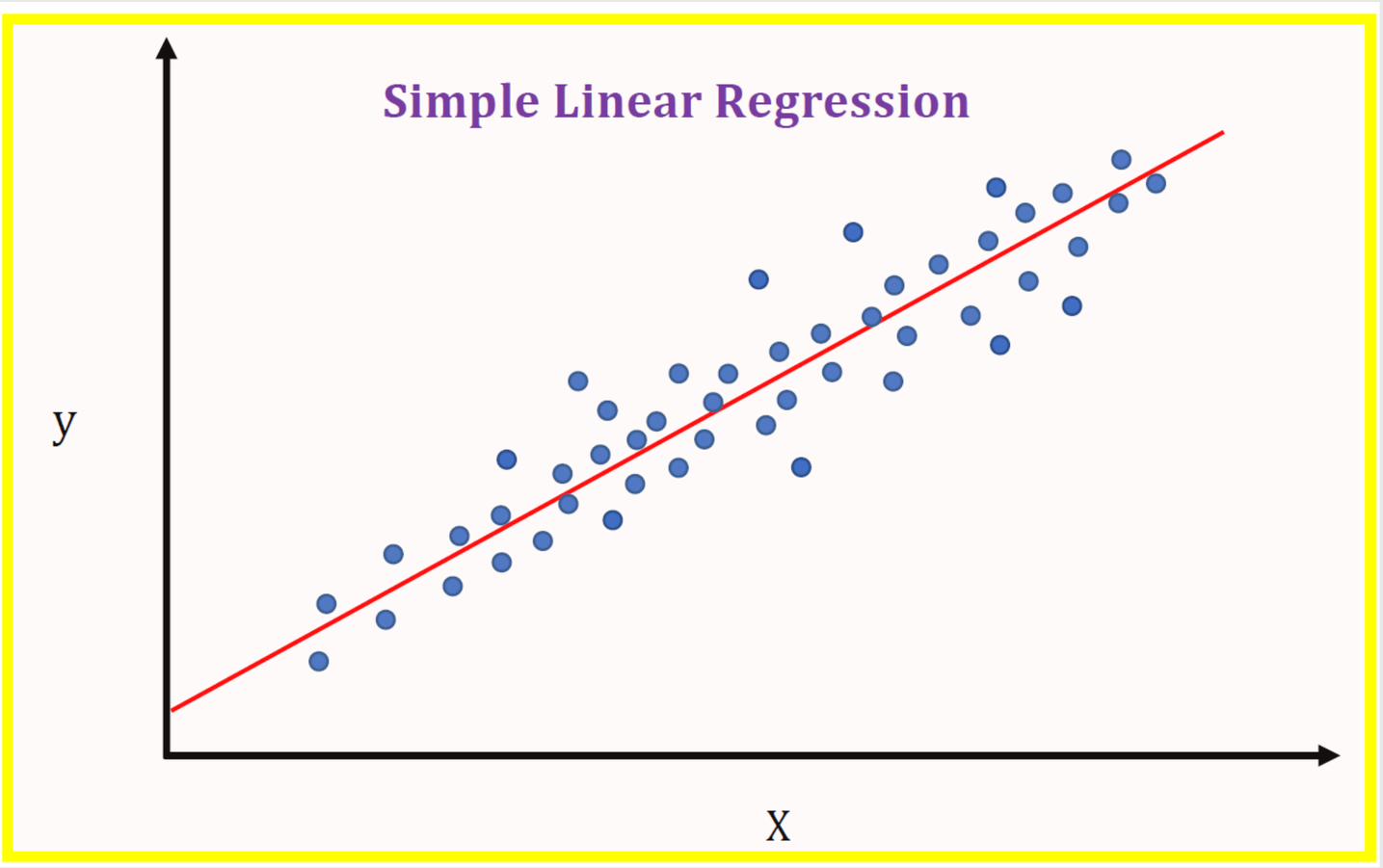

The equation for this line is:

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Where:

y represents the response variable.

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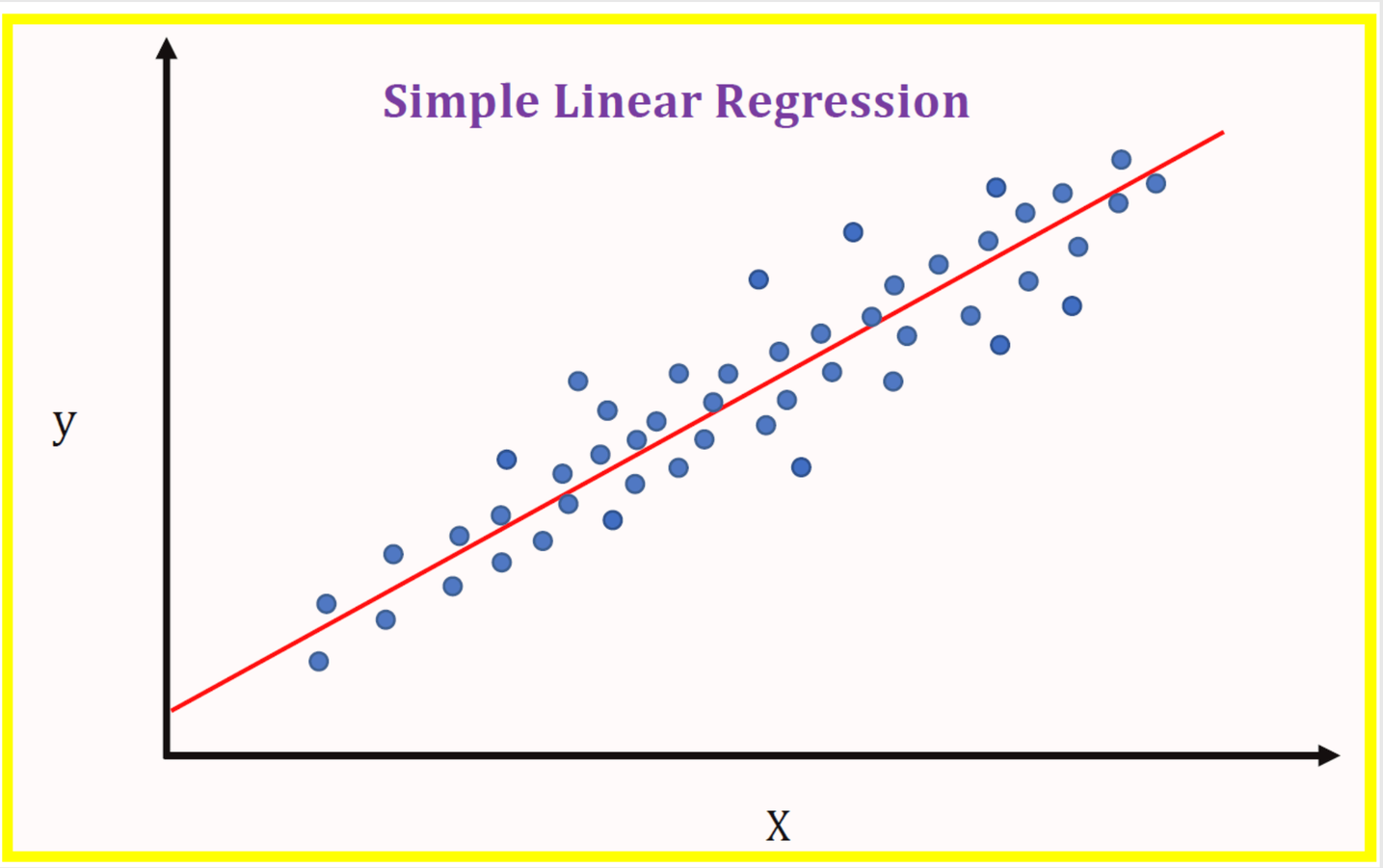

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Where:

y represents the response variable.

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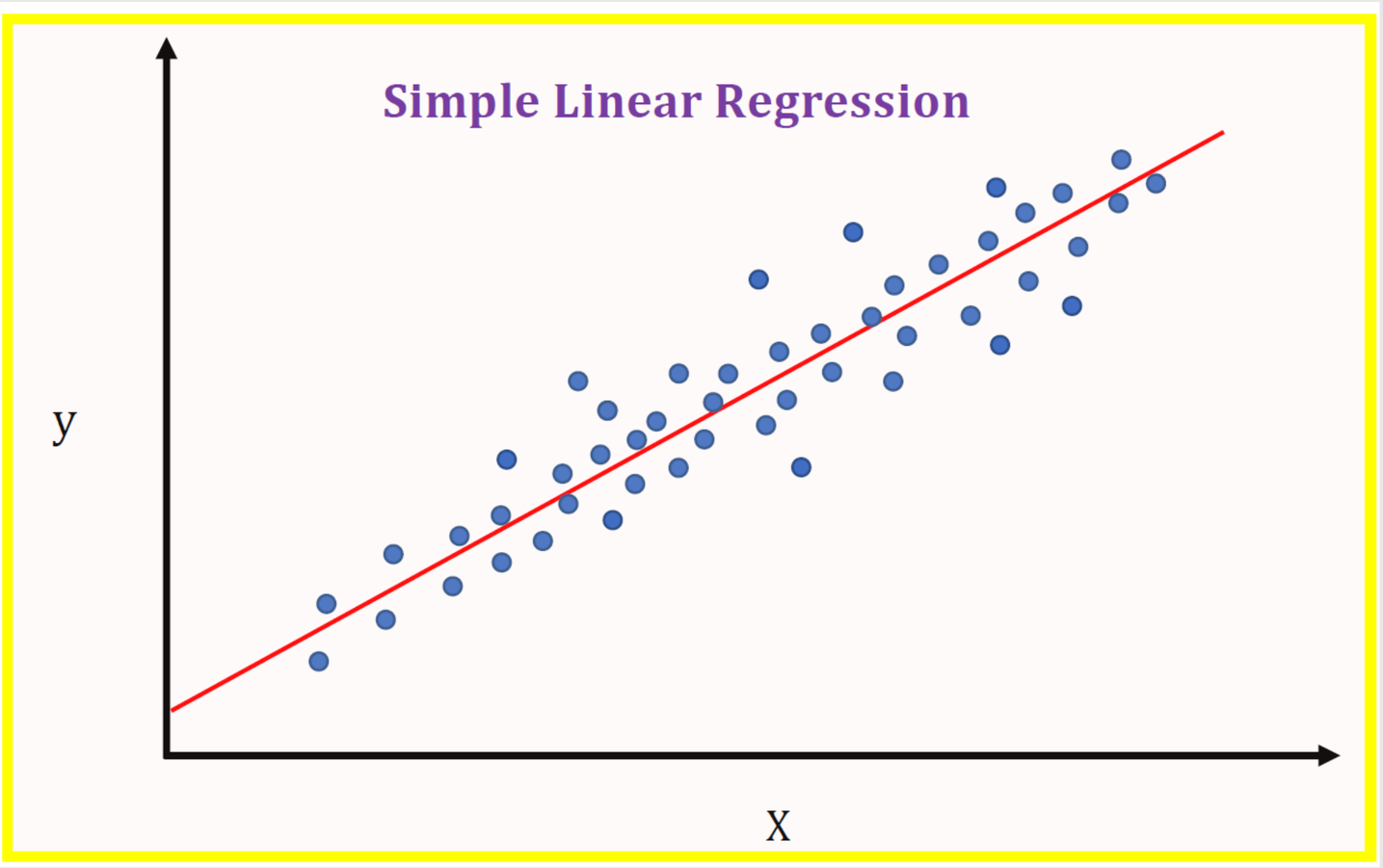

The equation for this line is:

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β0 is the intercept, which is the value of (y) when (x) is zero.

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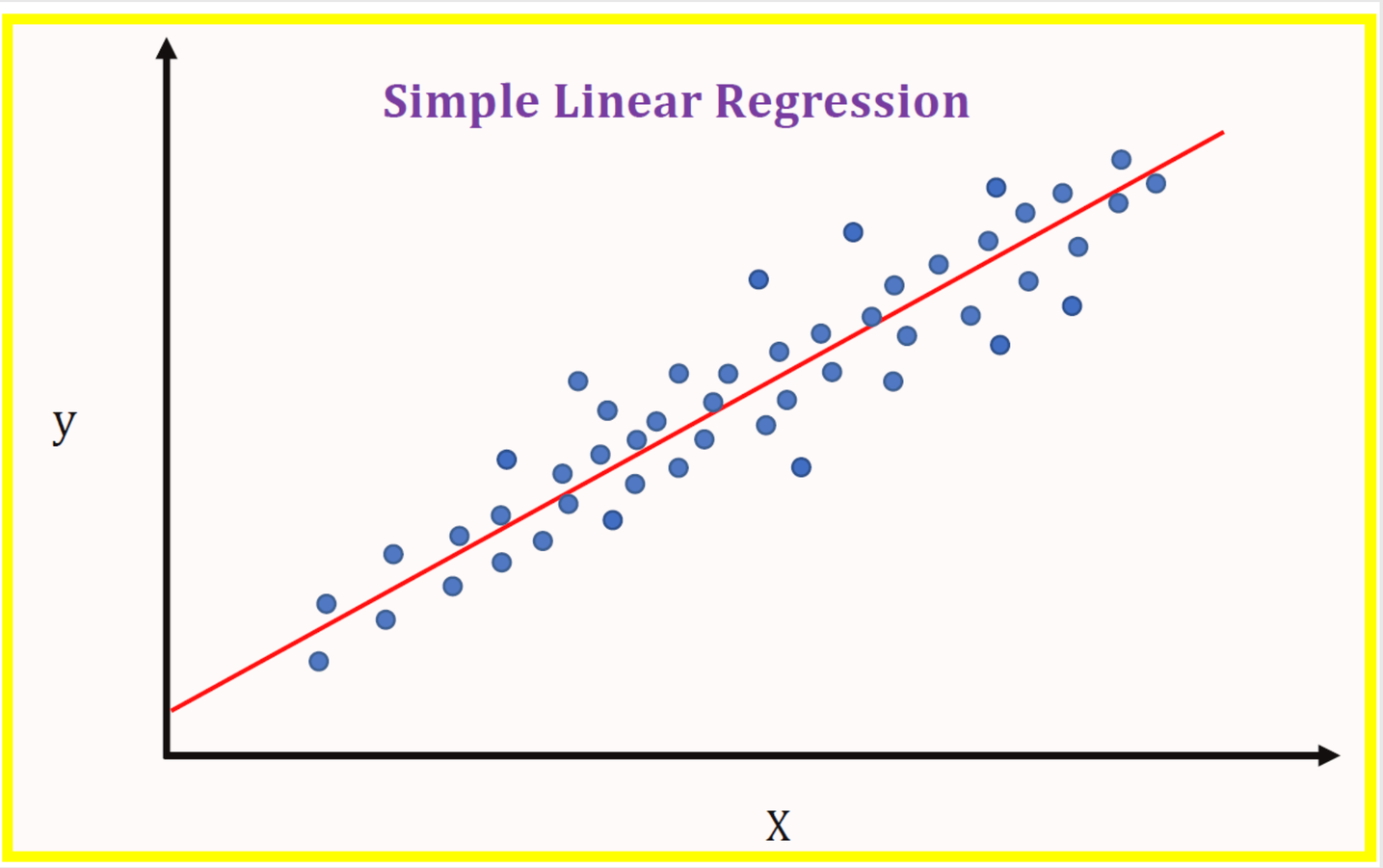

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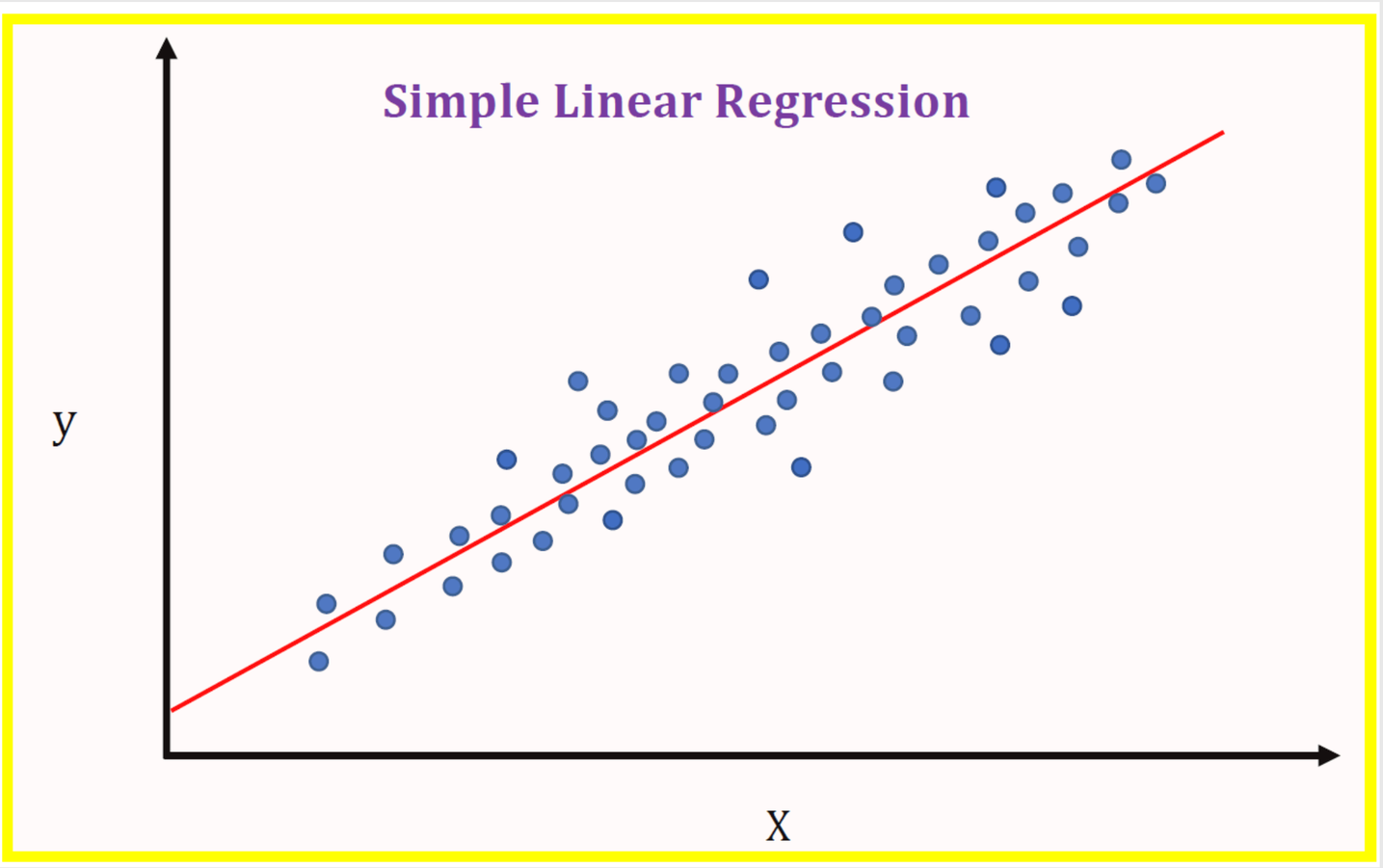

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ε is the error in the equation.

Thank You!