



$$\hat{Y} = \beta f(X) + \xi$$



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$$\hat{Y} = \beta f(X) + \xi$$

$$f(X) = X$$



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$$\hat{Y} = \beta X + \xi$$



$$\hat{Y} = \beta f(X) + \xi$$

$$f(X) = X + X^2 + \dots$$

$$\hat{Y} = \beta X + \xi$$



$$\hat{Y} = \beta f(X) + \xi$$

$$f(X) = X + X^2 + \dots$$

$$\hat{Y} = \beta X + \xi$$

$$\hat{Y} = \beta (X + X^2 + \dots) + \xi$$



$$\hat{Y} = \beta f(X) + \xi$$

$$f(X) = X + X^2$$

$$\hat{Y} = \beta X + \xi$$

$$\hat{Y} = \beta(X + X^2) + \xi$$

$$\hat{Y} = \beta_1 X + \beta_2 X^2 + \xi$$

