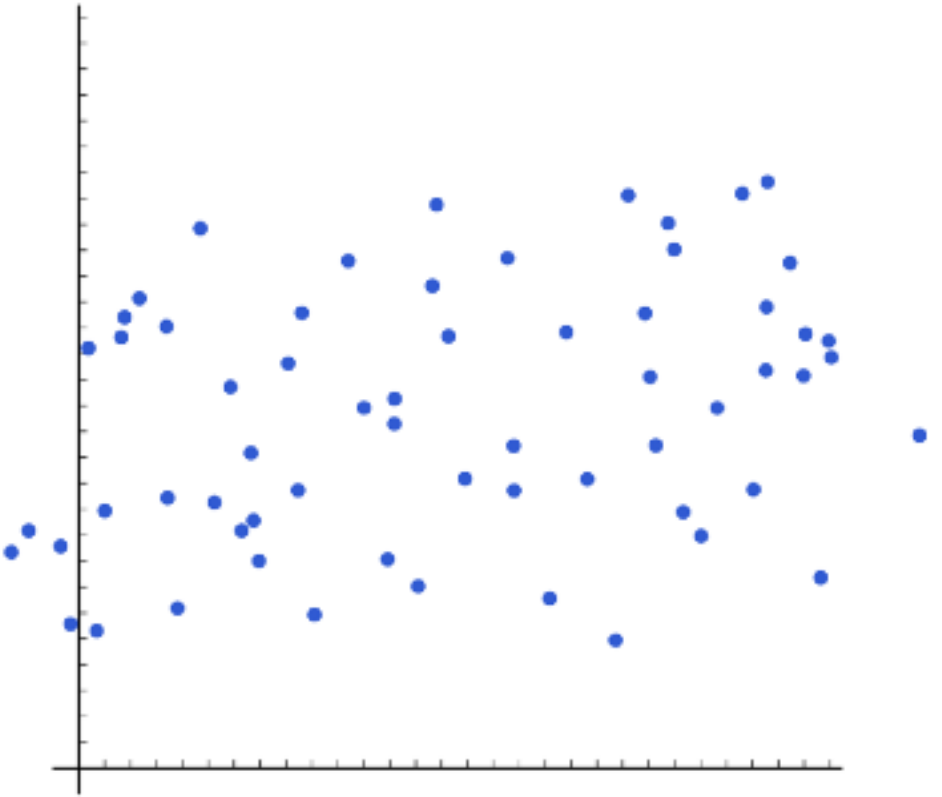

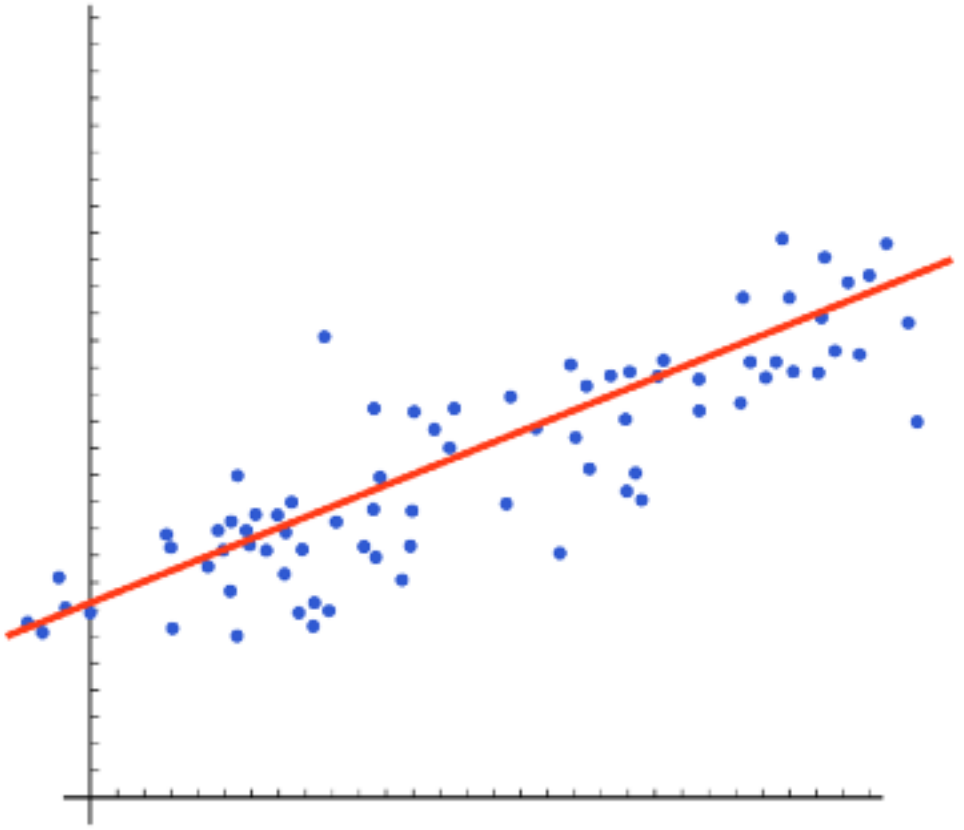

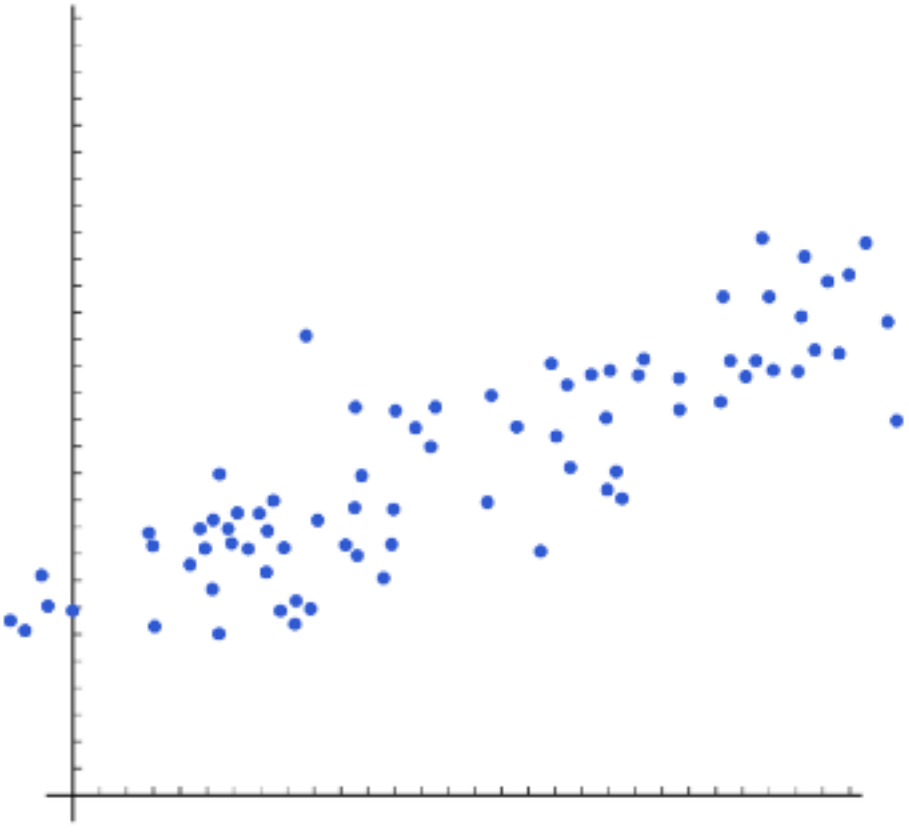

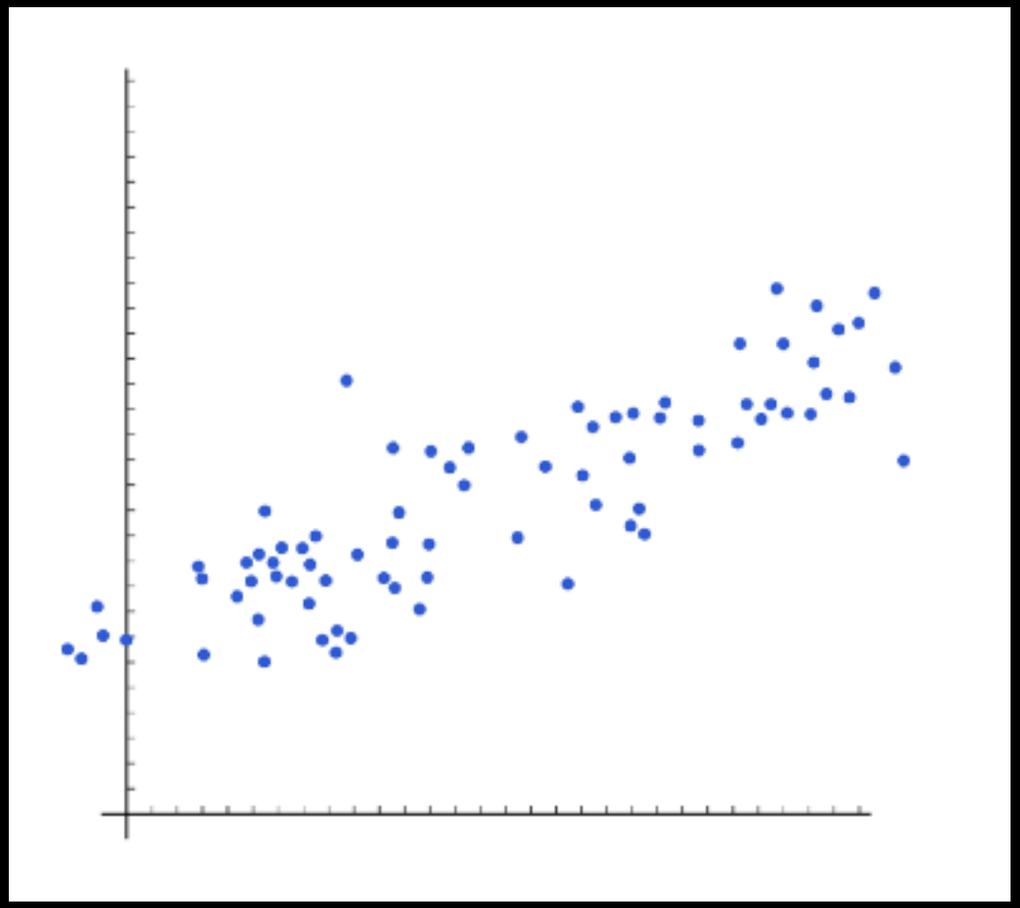

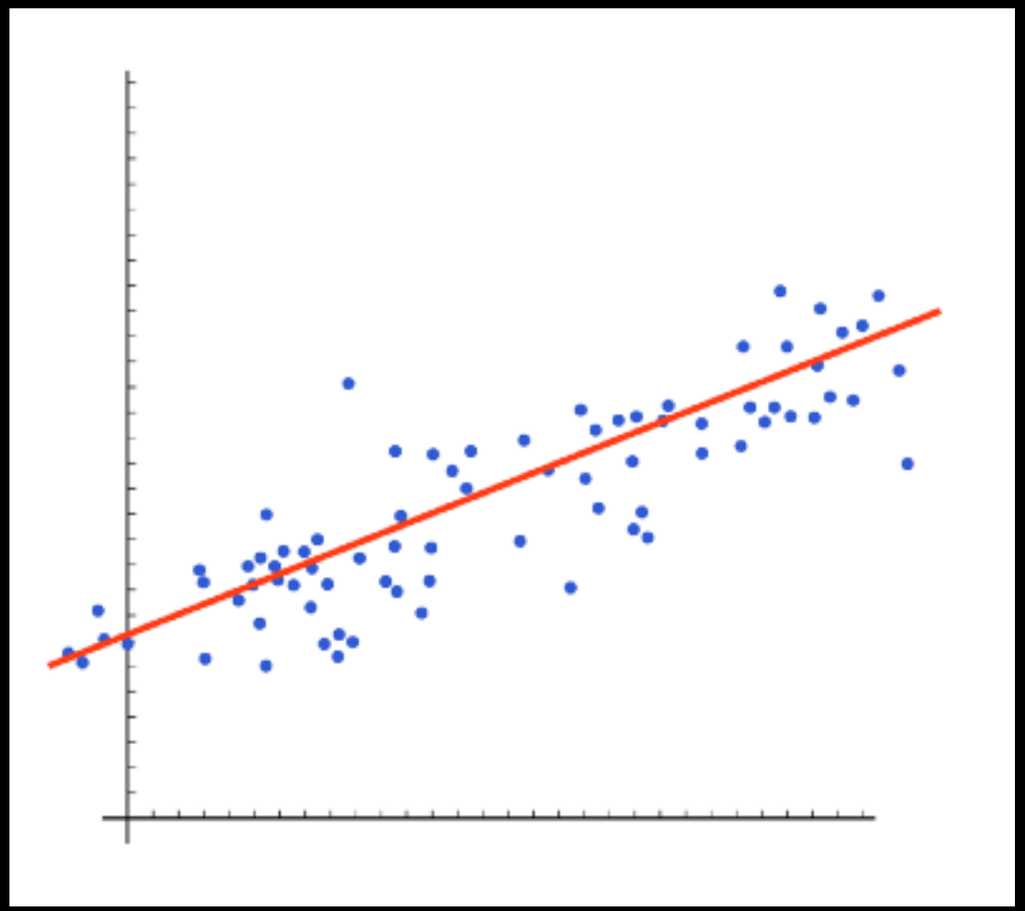

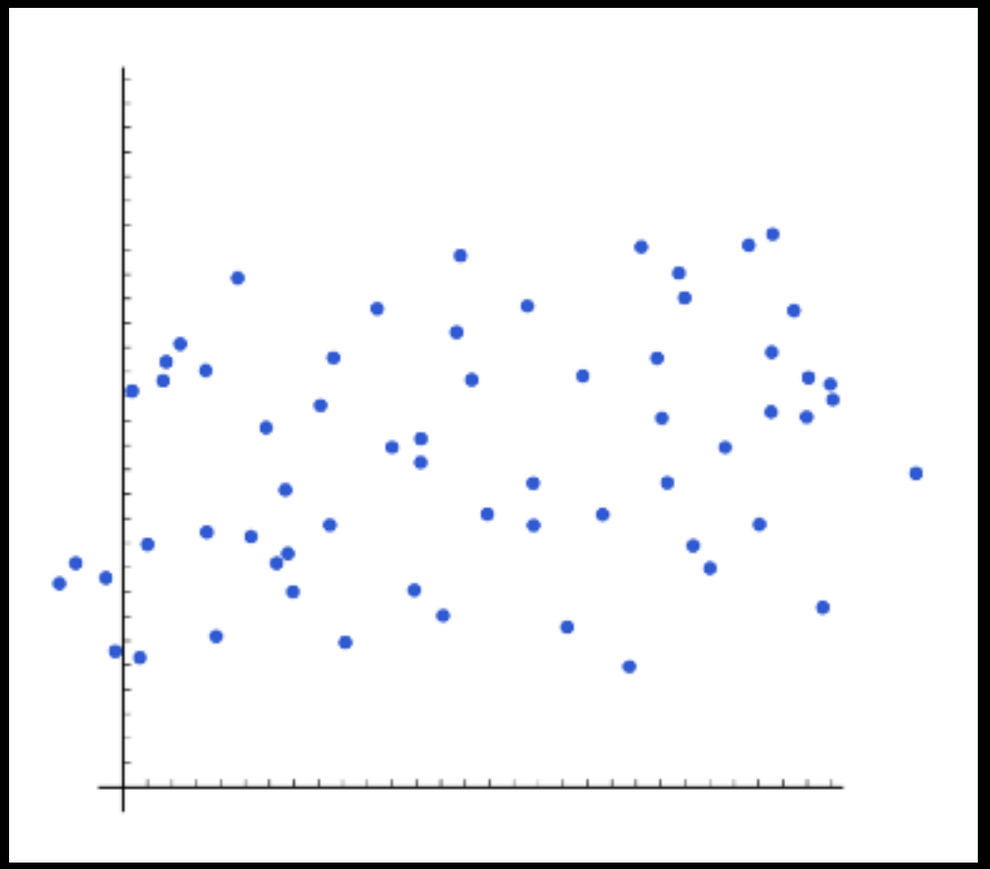

Statistics And Probability - Variance

- Continuous Probability Distribution

$$\mathrm{Var}(X) = \sigma^2 = \int (x-\mu)^2 f(x)\,dx = \int x^2 f(x)\,dx - \mu^2$$

- Discrete Probability Distribution

$$\mathrm{Var}(X) = \sum_{i=1}^{n} p_i \cdot (x_i - \mu)^2 = \sum_{i=1}^{n} (p_i \cdot x_i^2) - \mu^2$$