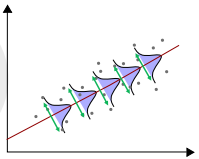
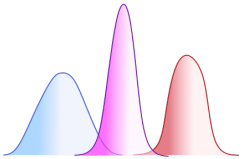
$$P(A|B) = \frac{P(B|A) \cdot P(A)}{P(B)}$$



$$\frac{P(B|A_i) \cdot P(A_i)}{\sum_{j=1}^{n} P(B|A_j) P(A_j)}$$



$$y_i = \beta_0 + \beta_1 x_{i,1} + \cdots + \beta_k x_{i,k} + \in_i$$

$$\frac{\int_a^b \binom{n+m}{m} x^m (1-x)^n dx}{\int_0^1 \binom{n+m}{m} x^m (1-x)^n dx}$$