

HW\_1021\_01

$$p(X) = \frac{e^{\beta_0 + \beta_1 X}}{1 + e^{\beta_0 + \beta_1 X}}$$

$$1 - p(X) = 1 - \frac{e^{\beta_0 + \beta_1 X}}{1 + e^{\beta_0 + \beta_1 X}} = \frac{1}{1 + e^{\beta_0 + \beta_1 X}}$$

$$\frac{p(X)}{1 - p(X)} = \frac{\frac{e^{\beta_0 + \beta_1 X}}{1 + e^{\beta_0 + \beta_1 X}}}{\frac{1}{1 + e^{\beta_0 + \beta_1 X}}} = e^{\beta_0 + \beta_1 X}$$