$$\frac{p}{1-p} = b^{\beta_0} \cdot b^{\beta_1 x_1} \cdots b^{\beta_i(x_i+1)} \cdots b^{\beta_n x_n}$$
$$= b^{\beta_0} \cdot b^{\beta_1 x_1} \cdots \underline{b^{\beta_i}} b^{x_i} \cdots b^{\beta_n x_n}$$