1   Item 1

Histogram of rnorm(5000, mean = 0, sd = 1)

rnorm(5000, mean = 0, sd = 1)
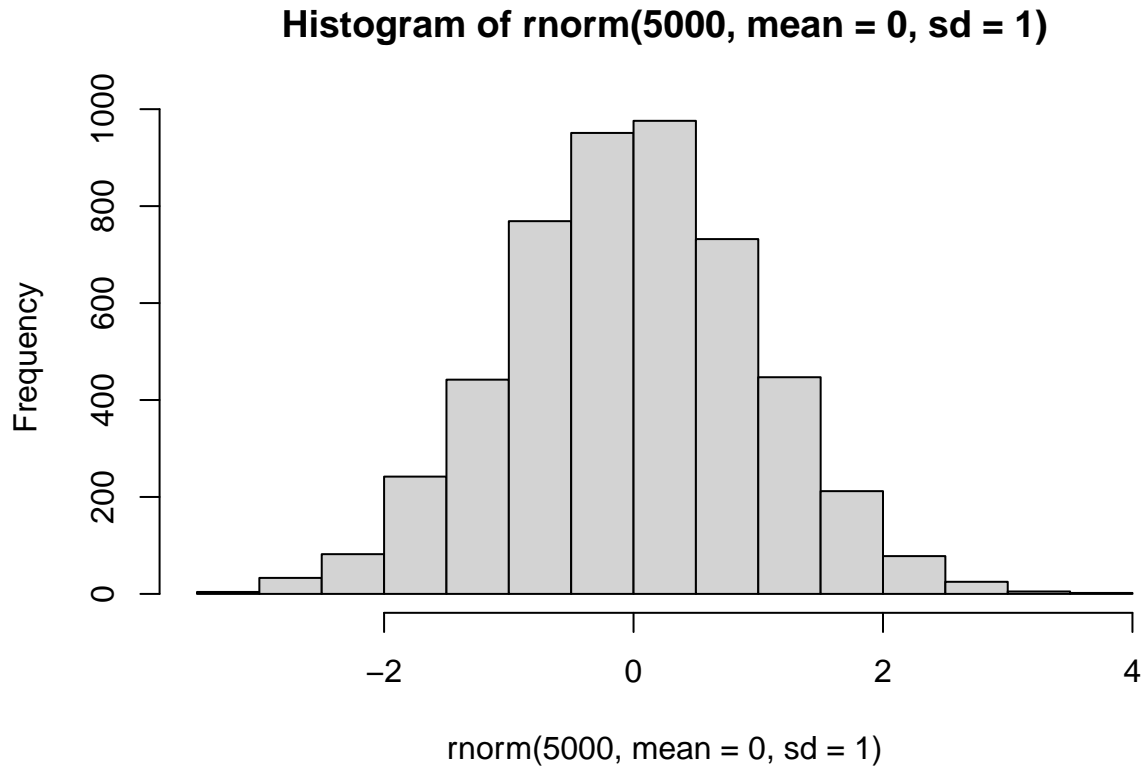
The joint probability for the JRT-DINA model can be written through the definition of conditional probability as

$$P(S, \mathbf{Y}, log(\mathbf{T})) = P(S)P(\mathbf{Y}, log(\mathbf{T})|S)$$

where,

$$S = \{\boldsymbol{\alpha}_n, \theta_n, \tau_n, \lambda_k, \gamma_k, \beta_j, \delta_j, \zeta_i, \mu_\beta, \mu_\delta, \mu_\zeta, \boldsymbol{\Sigma}_{item}, \boldsymbol{\Sigma}_{person}, \sigma^2_{\epsilon_j}\}$$

2 Item 2

3 Item 3

References

Fox, J.-P., & Marianti, S. (2017). Person-fit statistics for joint models for accuracy and speed. *Journal of Educational Measurement.*