

$$Y|m,p \sim \text{Normal}(m, p)$$

$$m|\mu,p \sim \text{Normal}(\mu, p)$$

$$p|\alpha,\beta \sim \text{Gamma}(\alpha, \beta)$$

**Integrate out** the model's  
unobserved layers:

$$\iint [Y|m,p,\mu,\alpha,\beta] \times [m|\mu,p] \times [p|\alpha,\beta] \, dm \, dp$$