



$$p = \text{rbeta}(\alpha = 1, \beta = 1)$$

$$g = \text{rbinom}(n = 4, \text{prob} = p)$$

$$P(R^b = 10 | g = 3, \epsilon = 0.01) = \binom{16}{10} \frac{3}{4}^{10} \left(1 - \frac{3}{4}\right)^6$$