Here are the R commands to find probabilities and quantiles for the "named" distributions we have talked about in STAT 511 and STAT 512.

DISCRETE MODELS: Binomial, geometric, negative binomial, hypergeometric, Poisson.

Model	$p_Y(y) = P(Y = y)$	$F_Y(y) = P(Y \leq y)$	ϕ_c
$Y \sim b(n, p)$	`dbinom(y,n,p)`	`pbinom(y,n,p)`	`qbinom(c,n,p)`
$Y \sim \text{geom}(p)$	`dgeom(y-1,p)`	`pgeom(y-1,p)`	`1+qgeom(c,p)`
$Y \sim \text{nib}(r, p)$	`dnbinom(y-r,r,p)`	`pnbinom(y-r,r,p)`	`r+nbinom(c,r,p)`
$Y \sim \text{hyper}(N, n, r)$	`dhyper(y,r,N-r,n)`	`phyper(y,r,N-r,n)`	`qhyper(c,r,N-r,n)`
$Y \sim \text{Poisson}(\lambda)$	dpois(y,λ)	ppois(y,λ)	qpois(c,λ)

NOTE: In discrete distributions, the cth quantile ϕ_c is taken to be the smallest value satisfying $F_Y(\phi_c) = P(Y \leq \phi_c) \geq c$. Note that $0 < c < 1$.

CONTINUOUS MODELS: Uniform, normal, exponential, gamma, χ^2, beta, t, F.

Model	$F_Y(y) = P(Y \leq y)$	ϕ_c
$Y \sim \mathcal{U}(\theta_1, \theta_2)$	punif(y,θ_1,θ_2)	qunif(c,θ_1,θ_2)
$Y \sim \mathcal{N}(\mu, \sigma^2)$	pnorm(y,μ,σ)	qnorm(c,μ,σ)
$Y \sim \text{exponential}(\beta)$	pexp(y,$1/\beta$)	qexp(c,$1/\beta$)
$Y \sim \text{gamma}(\alpha, \beta)$	pgamma(y,α,$1/\beta$)	qgamma(c,α,$1/\beta$)
$Y \sim \chi^2(\nu)$	pchisq(y,ν)	qchisq(c,ν)
$Y \sim \text{beta}(\alpha, \beta)$	pbeta(y,α,β)	qbeta(c,α,β)
$Y \sim t(\nu)$	pt(y,ν)	qt(c,ν)
$Y \sim F(\nu_1, \nu_2)$	pf(y,ν_1,ν_2)	qf(c,ν_1,ν_2)

NOTE: In continuous distributions, the cth quantile ϕ_c satisfies $F_Y(\phi_c) = P(Y \leq \phi_c) = c$. Note that $0 < c < 1$.