distribution	pmf and domain	mean $E(X)$	variance $var(X)$	mgf $M(s)$
$Bernoulli(p)$	$p(x) = p^x(1-p)^{1-x},\ x = 0, 1$	p	$p(1-p)$	$1 - p + pe^s$
$Binomial(n,p)$	$p(x) = \binom{n}{x} p^x (1-p)^{n-x},\ x = 0, 1, \ldots, n$	np	$np(1-p)$	$(1 - p + pe^s)^n$
$Poisson(\lambda)$	$p(x) = \frac{e^{-\lambda}\lambda^x}{x!},\ x = 0, 1, 2, \ldots$	λ	λ	$e^{\lambda(e^s - 1)}$
$Geometric(p)$	$p(x) = p(1-p)^{x-1},\ x = 1, 2, 3, \ldots$	$\frac{1}{p}$	$\frac{1-p}{p^2}$	$\frac{pe^s}{1-(1-p)e^s}$
$Neg.bin(r,p)$	$p(x) = \binom{x-1}{r-1} p^r (1-p)^{x-r},$ $x = r, r+1, r+2, \ldots$	$\frac{r}{p}$	$\frac{r(1-p)}{p^2}$	$\left(\frac{pe^s}{1-(1-p)e^s}\right)^r$
$Hyp.geom(n, M, N)$	$p(x) = \frac{\binom{M}{x}\binom{N-M}{n-x}}{\binom{N}{n}},\ x = 0, 1, \ldots, n$ $x \le M,\ n - x \le N - M$	$\frac{nM}{N}$	$\frac{nM}{N}(1 - \frac{M}{N})(\frac{N-n}{N-1})$	

distribution	pdf and domain	mean $E(X)$	variance $var(X)$	mgf $M(s)$
$uniform(a,b)$	$f(x) = \frac{1}{b-a},\ a < x < b$	$\frac{a+b}{2}$	$\frac{(b-a)^2}{12}$	$\frac{e^{sb} - e^{sa}}{b-a}$
$exp(\lambda)$	$f(x) = \lambda e^{-\lambda x},\ x > 0$	$\frac{1}{\lambda}$	$\frac{1}{\lambda^2}$	$(1 - \frac{s}{\lambda})^{-1}$
$Gamma(\alpha, \beta)$	$f(x) = \frac{x^{\alpha-1}e^{-x/\beta}}{\beta^\alpha \Gamma(\alpha)},\ x > 0$	$\alpha\beta$	$\alpha\beta^2$	$(1 - \beta s)^{-\alpha}$
$Normal(\mu, \sigma^2)$	$f(x) = \frac{e^{-\frac{1}{2}(\frac{x-\mu}{\sigma})^2}}{\sqrt{2\pi\sigma^2}},\ -\infty < x < \infty$	μ	σ^2	$e^{\mu s + \frac{\sigma^2 s^2}{2}}$
$chi-square\ with$ $\nu\ d.f.\ \ \chi^2_\nu$	$f(x) = \frac{x^{\frac{\nu}{2}-1}e^{-x/2}}{2^{\frac{\nu}{2}}\Gamma(\frac{\nu}{2})},\ x > 0$	ν	2ν	$(1 - 2s)^{-\frac{\nu}{2}}$
$Beta(\alpha, \beta)$	$f(x) = \frac{\Gamma(\alpha+\beta)}{\Gamma(\alpha)\Gamma(\beta)} x^{\alpha-1}(1-x)^{\beta-1},\ 0 < x < 1$	$\frac{\alpha}{\alpha+\beta}$	$\frac{\alpha\beta}{(\alpha+\beta)^2(\alpha+\beta+1)}$	

Euler Gamma function: for $\alpha > 0$, $\Gamma(\alpha) = \displaystyle\int_0^\infty u^{\alpha-1}e^{-u}\,du.$

Some properties of the Euler Gamma function:
1. If $n > 0$ is an integer, then $\Gamma(n) = (n-1)!$
2. $\Gamma(\frac{1}{2}) = \sqrt{\pi}$
3. (Reduction property) If $x > 1$, then $\Gamma(x) = (x-1)\Gamma(x-1)$

	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
0.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
0.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
0.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
0.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
0.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
0.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
0.7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
0.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
0.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306	.9319
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
1.8	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699	.9706
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	.9767
2.0	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812	.9817
2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
2.2	.9861	.9864	.9868	.9871	.9875	.9878	.9881	.9884	.9887	.9890
2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
2.5	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
2.8	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
3.0	.9987	.9987	.9987	.9988	.9988	.9989	.9989	.9989	.9990	.9990
3.1	.9990	.9991	.9991	.9991	.9992	.9992	.9992	.9992	.9993	.9993
3.2	.9993	.9993	.9994	.9994	.9994	.9994	.9994	.9995	.9995	.9995
3.3	.9995	.9995	.9995	.9996	.9996	.9996	.9996	.9996	.9996	.9997
3.4	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998

The standard normal table. The entries in this table provide the numerical values of $\Phi(y) = \mathbf{P}(Y \leq y)$, where Y is a standard normal random variable, for y between 0 and 3.49. For example, to find $\Phi(1.71)$, we look at the row corresponding to 1.7 and the column corresponding to 0.01, so that $\Phi(1.71) = .9564$. When y is negative, the value of $\Phi(y)$ can be found using the formula $\Phi(y) = 1 - \Phi(-y)$.