variance	skewness	characteristic function
pq	$\dfrac{q-p}{\sqrt{pq}}$	$q+pe^{it}$
$\frac{1}{12}(n^2-1)$	0	$\dfrac{e^{it}(1-e^{int})}{n(1-e^{it})}$
$np(1-p)$	$\dfrac{1-2p}{\sqrt{np(1-p)}}$	$(1-p+pe^{it})^n$
$(1-p)p^{-2}$	$\dfrac{2-p}{\sqrt{1-p}}$	$\dfrac{p}{e^{-it}-1+p}$
λ	$\lambda^{-\frac{1}{2}}$	$\exp\{\lambda(e^{it}-1)\}$
$n(1-p)p^{-2}$	$\dfrac{2-p}{\sqrt{n(1-p)}}$	$\left(\dfrac{p}{e^{-it}-1+p}\right)^n$
$\dfrac{npq(N-n)}{N-1}$	$\dfrac{q-p}{\sqrt{npq}}\sqrt{\dfrac{N-1}{N-n}}\left(\dfrac{N-2n}{N-2}\right)$	$\dfrac{\binom{N-b}{n}}{\binom{N}{n}}F(-n,-b;N-b-n+1;e^{it})$†
$\frac{1}{12}(b-a)^2$	0	$\dfrac{e^{ibt}-e^{iat}}{it(b-a)}$
λ^{-2}	2	$\dfrac{\lambda}{\lambda-it}$
σ^2	0	$e^{i\mu t-\frac{1}{2}\sigma^2t^2}$
$\tau\lambda^{-2}$	$2\tau^{-\frac{1}{2}}$	$\left(\dfrac{\lambda}{\lambda-it}\right)^\tau$
–	–	$e^{-\|t\|}$
$\dfrac{ab(a+b)^2}{a+b+1}$	$\dfrac{2(a-b)}{a+b+2}$	$M(a,a+b,it)$†
$\frac{1}{6}\pi^2$	$1.29857\ldots$	$\Gamma(1-it)$
$2-\dfrac{\pi}{2}$	$\dfrac{2\sqrt{\pi}(\pi-3)}{(4-\pi)^{3/2}}$	$1+\sqrt{2\pi}it\big(1-\Phi(-it)\big)e^{-\frac{1}{2}t^2}$†
$2\lambda^{-2}$	0	$\dfrac{\lambda^2}{\lambda^2+t^2}$

† $F(a,b;c;z)$ is Gauss's hypergeometric function and $M(a,a+b,it)$ is a confluent hypergeometric function. The $N(0,1)$ distribution function is denoted by Φ.

Appendix VI

Chronology

A subset of the mathematicians, scientists and others mentioned in this book.

Pythagoras 6th century BC
Plato 428–348 BC
Diogenes 400–320 BC
Euclid 325–265 BC
Seneca 4 BC–65
Luca Pacioli 1445–1514
Gerolamo Cardano 1501–1576
Gerardus Mercator 1512–1594
Francis Bacon 1561–1626
Galileo Galilei 1564–1642
Pierre de Fermat 1601–1665
Blaise Pascal 1623–1662
Christiaan Huygens 1629–1695
Lorenzo Tonti 1630–1695
Antony van Leeuwenhoek 1632–1723
Samuel Pepys 1633–1703
Isaac Newton 1642–1727
Gottfried von Leibniz 1646–1716
William of Orange 1650–1702
Jacob [James] Bernoulli 1654–1705
Guillaume de L'Hôpital 1661–1704
John Arbuthnot 1667–1735
Abraham de Moivre 1667–1754
Pierre de Montmort 1678–1719
Brook Taylor 1685–1731
Nicholas Bernoulli 1687–1759
William Stukeley 1687–1765
James Stirling 1692–1770
Daniel Bernoulli 1700–1782
Thomas Bayes 1701–1761
Leonhard Euler 1707–1783
Georges Buffon 1707–1788
Edward Waring 1734–1798
Joseph-Louis Lagrange 1736–1813
Pierre-Simon de Laplace 1749–1827
Adrien-Marie Legendre 1752–1833
Heinrich Olbers 1758–1840
Thomas Malthus 1766–1834
Jean Fourier 1768–1830
Robert Brown 1773–1858
Carl Friedrich Gauss 1777–1855
Siméon Poisson 1781–1840
Friedrich Wilhelm Bessel 1784–1846
Georg Ohm 1789–1854
Augustin-Louis Cauchy 1789–1857
George Green 1793–1841
Irénée-Jules Bienaymé 1796–1878
Niels Abel 1802–1829
Carl Jacobi 1804–1851
Johann Dirichlet 1805–1859
Augustus De Morgan 1806–1871
William Makepeace Thackeray 1811–1863
Pierre Laurent 1813–1854
James Sylvester 1814–1897
George Boole 1815–1864
Karl Weierstrass 1815–1897
Pafnuti Chebyshov 1821–1894
Joseph Bertrand 1822–1900
Francis Galton 1822–1911
Leopold Kronecker 1823–1891
Gustav Kirchhoff 1824–1887
Georg Bernhard Riemann 1826–1866
Morgan Crofton 1826–1915
Henry Watson 1827–1903
Henry Labouchere 1831–1912
Lewis Carroll [Charles Dodgson] 1832–1898
Rudolf Lipschitz 1832–1903
John Venn 1834–1923
Simon Newcomb 1835–1909
Paul Bachmann 1837–1920
Josiah Willard Gibbs 1839–1903
Charles Peirce 1839–1914

William Whitworth 1840–1905
Ambrose Bierce 1842–1914
Rayleigh [John Strutt] 1842–1919
Hermann Schwarz 1843–1921
Georg Cantor 1845–1918
Vilfredo Pareto 1848–1923
Ferdinand Georg Frobenius 1849–1917
Jules Henri Poincaré 1854–1912
Thomas Stieltjes 1856–1894
Andrei A. Markov 1856–1922
Alexander Liapunov 1857–1918
Karl Pearson 1857–1936
Ernesto Cesàro 1859–1906
Alfred Dreyfus 1859–1935
Otto Hölder 1859–1937
Alfred Whitehead 1861–1947
David Hilbert 1862–1943
Hermann Minkowski 1864–1909
Felix Hausdorff 1868–1942
Johan Jensen 1869–1925
Louis Bachelier 1870–1946
Ernest Rutherford 1871–1937
George Udny Yule 1871–1951
Emile Borel 1871–1956
Paul Langevin 1872–1946
Bertrand Russell 1872–1970
Johan Steffensen 1873–1961
Henri Lebesgue 1875–1941
Francesco Cantelli 1875–1966
William Gosset [Student] 1876–1937
Tatiana Ehrenfest 1876–1964
Edmund Landau 1877–1938
Godfrey H. Hardy 1877–1947
Agner Erlang 1878–1929
Pierre Fatou 1878–1929
Guido Fubini 1879–1943
Albert Einstein 1879–1955
Paul Ehrenfest 1880–1933
Leonard Ornstein 1880–1941
Evgenii Slutsky 1880–1948
Norman Campbell 1880–1949
Sergei Bernstein 1880–1968
Oskar Perron 1880–1975
Arthur Eddington 1882–1944
Hans Geiger 1882–1945
Harry Bateman 1882–1946
John Maynard Keynes 1883–1946
Paul Lévy 1886–1971
Johann Radon 1887–1956
George Pólya 1887–1985
Wilhelm Lenz 1888–1957
Sydney Chapman 1888–1970
Ronald Fisher 1890–1962
Emil Gumbel 1891–1966
Stefan Banach 1892–1945
Carlo Bonferroni 1892–1960
John B. S. Haldane 1892–1964
Paul Getty 1892–1976
Harald Cramér 1893–1985
Alexander Khinchin 1894–1959
Norbert Wiener 1894–1964
Heinz Hopf 1894–1971
Harold Hotelling 1895–1973
Alfred Hitchcock 1899–1980
Joseph Berkson 1899–1982
Salomon Bochner 1899–1982
George Uhlenbeck 1900–1988
Ernst Ising 1900–1998
Abraham Wald 1902–1950
George Zipf 1902–1950
Paul Dirac 1902–1984
John von Neumann 1903–1957
Andrei Kolmogorov 1903–1987
William Feller 1906–1970
Eugene Lukacs 1906–1987
Michel Loève 1907–1979
Stanislaw Ulam 1909–1984
Paul Turán 1910–1976
Maurice Bartlett 1910–2002
Garrett Birkhoff 1911–1996
Paul Erdős 1913–1996
Henry Lancaster 1913–2001
Mark Kac 1914–1984
Wassily Hoeffding 1914–1991
Wolfgang Doeblin 1915–1940
Nicholas Metropolis 1915–1999
Leonard Jimmie Savage 1917–1971
Patrick Moran 1917–1988
Richard Feynman 1918–1988
Alfred Rényi 1921–1970
Pieter Kasteleyn 1924–1996
Lucien Le Cam 1924–2000
John Kemeny 1926–1992
Frank Spitzer 1926–1992
Roland Dobrushin 1929–1995
Radha Laha 1930–1999
Fischer Black 1938–1995

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