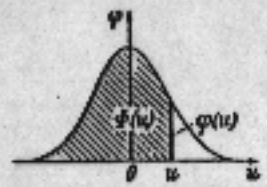
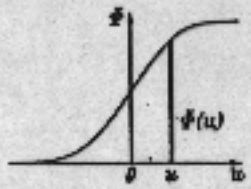
Summenfunktion der Normalverteilung

$$\Phi(u) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{u} e^{-(t)^2} dt; \qquad \Phi(u) = 1 - \Phi(-u)$$

Ableseheispiel: $\Phi(0{,}76) = 0{,}776373$





u	0,00	0,01	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,09	u
0,0	0,500000	0,503989	0,507978	0,511966	0,515953	0,519939	0,523922	0,527903	0,531881	0,535856	0,0
0,1	,539828	,543795	,547758	,551717	,555670	,559618	,563559	,567495	,571424	,575345	0,1
0,2	,579260	,583166	,587064	,590954	,594835	,598706	,602568	,606420	,610261	,614092	0,2
0,3	,617911	,621720	,625516	,629300	,633072	,636831	,640576	,644309	,648027	,651732	0,3
0,4	,655422	,659097	,662757	,666402	,670031	,673645	,677242	,680822	,684386	,687933	0,4
0,5	,691462	,694974	,698468	,701944	,705401	,708840	,712260	,715661	,719043	,722405	0,5
0,6	,725747	,729069	,732371	,735653	,738914	,742154	,745373	,748571	,751748	,754903	0,6
0,7	,758036	,761148	,764238	,767305	,770350	,773373	,776373	,779350	,782305	,785236	0,7
0,8	,788145	,791030	,793892	,796731	,799546	,802337	,805105	,807850	,810570	,813267	0,8
0,9	,815940	,818589	,821214	,823814	,826391	,828944	,831472	,833977	,836457	,838913	0,9
1,0	,841345	,843752	,846136	,848495	,850830	,853141	,855428	,857690	,859929	,862143	1,0
1,1	,864334	,866500	,868643	,870762	,872857	,874928	,876976	,879000	,881000	,882977	1,1
1,2	,884930	,886861	,888768	,890651	,892512	,894350	,896165	,897958	,899727	,901475	1,2
1,3	,903200	,904902	,906582	,908241	,909877	,911492	,913085	,914657	,916207	,917736	1,3
1,4	,919243	,920730	,922196	,923641	,925066	,926471	,927855	,929219	,930563	,931888	1,4
1,5	,933193	,934478	,935745	,936992	,938220	,939429	,940620	,941792	,942947	,944083	1,5
1,6	,945201	,946301	,947384	,948449	,949497	,950529	,951543	,952540	,953521	,954486	1,6
1,7	,955435	,956367	,957284	,958185	,959070	,959941	,960796	,961636	,962462	,963273	1,7
1,8	,964070	,964852	,965620	,966375	,967116	,967843	,968557	,969258	,969946	,970621	1,8
1,9	,971283	,971933	,972571	,973197	,973810	,974412	,975002	,975581	,976148	,976705	1,9
2,0	,977250	,977784	,978308	,978822	,979325	,979818	,980301	,980774	,981237	,981691	2,0
2,1	,982136	,982571	,982997	,983414	,983823	,984222	,984614	,984997	,985371	,985738	2,1
2,2	,986097	,986447	,986791	,987126	,987455	,987776	,988089	,988396	,988696	,988989	2,2
2,3	,989276	,989556	,989830	,990097	,990358	,990613	,990863	,991106	,991344	,991576	2,3
2,4	,991802	,992024	,992240	,992451	,992656	,992857	,993053	,993244	,993431	,993613	2,4
2,5	,993790	,993963	,994132	,994297	,994457	,994614	,994766	,994915	,995060	,995201	2,5
2,6	,995339	,995473	,995604	,995731	,995855	,995975	,996093	,996207	,996319	,996427	2,6
2,7	,996533	,996636	,996736	,996833	,996928	,997020	,997110	,997197	,997282	,997365	2,7
2,8	,997445	,997523	,997599	,997673	,997744	,997814	,997882	,997948	,998012	,998074	2,8
2,9	0,998134	0,998193	0,998250	0,998305	0,998359	0,998411	0,998462	0,998511	0,998559	0,998605	2,9

u	3,0	3,5	4,0	4,5	5,0	6,0	7,0	8,0	9,0	10,0	u
$\Phi(u)$	$1 - 1{,}350 \cdot 10^{-3}$	$1 - 2{,}326 \cdot 10^{-4}$	$1 - 3{,}167 \cdot 10^{-5}$	$1 - 3{,}398 \cdot 10^{-6}$	$1 - 2{,}867 \cdot 10^{-7}$	$1 - 9{,}866 \cdot 10^{-10}$	$1 - 1{,}280 \cdot 10^{-12}$	$1 - 6{,}221 \cdot 10^{-16}$	$1 - 1{,}129 \cdot 10^{-19}$	$1 - 7{,}620 \cdot 10^{-24}$	$\Phi(u)$

$\Phi(u)$	50%	60%	70%	80%	90%	95%	97,5%	99%	99,5%	99,75%	99,9%	99,95%	$\Phi(u)$
u	0	0,253	0,524	0,842	1,282	1,645	1,960	2,326	2,576	2,807	3,090	3,291	u

Für $\Phi(u) = 1 - \alpha$ ergeben sich für u die Werte $u_{1-\alpha}$: