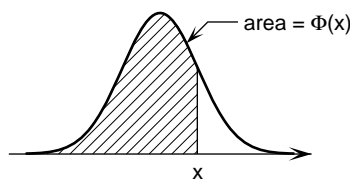


# Tabeller

**Tabell 1. Standardiserad normalfördelning**

$\Phi(x) = P(X \leq x)$  där  $X \in N(0, 1)$

För negativa värden, utnyttja att  $\Phi(x) = 1 - \Phi(-x)$

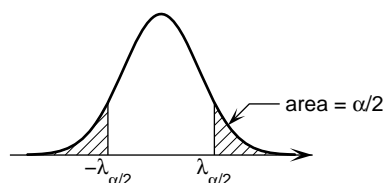
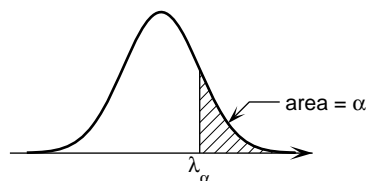


x	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
0.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
0.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
0.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
0.4	.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	.97725	.97778	.97831	.97882	.97932	.97982	.98030	.98077	.98124	.98169
2.1	.98214	.98257	.98300	.98341	.98382	.98422	.98461	.98500	.98537	.98574
2.2	.98610	.98645	.98679	.98713	.98745	.98778	.98809	.98840	.98870	.98899
2.3	.98928	.98956	.98983	.99010	.99036	.99061	.99086	.99111	.99134	.99158
2.4	.99180	.99202	.99224	.99245	.99266	.99286	.99305	.99324	.99343	.99361
2.5	.99379	.99396	.99413	.99430	.99446	.99461	.99477	.99492	.99506	.99520
2.6	.99534	.99547	.99560	.99573	.99585	.99598	.99609	.99621	.99632	.99643
2.7	.99653	.99664	.99674	.99683	.99693	.99702	.99711	.99720	.99728	.99736
2.8	.99744	.99752	.99760	.99767	.99774	.99781	.99788	.99795	.99801	.99807
2.9	.99813	.99819	.99825	.99831	.99836	.99841	.99846	.99851	.99856	.99861

**Tabell 2. Normalfördelningens kvantiler**

$P(X > \lambda_\alpha) = \alpha$  där  $X \in N(0, 1)$

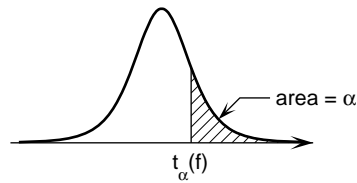
$\alpha$	$\lambda_\alpha$	$\alpha$	$\lambda_\alpha$
0.1	1.2816	0.001	3.0902
0.05	1.6449	0.0005	3.2905
0.025	1.9600	0.0001	3.7190
0.01	2.3263	0.00005	3.8906
0.005	2.5758	0.00001	4.2649



3.0	.99865
3.1	.99903
3.2	.99931
3.3	.99952
3.4	.99966
3.5	.99977
3.6	.99984
3.7	.99989
3.8	.99993
3.9	.99995
4.0	.99997

**Tabell 3.  $t$ -fördelningen**

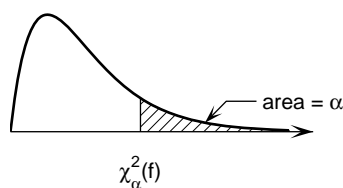
$P(X > t_\alpha(f)) = \alpha$  där  $X \in t(f)$



$f$	$\alpha$	0.1	0.05	0.025	0.01	0.005	0.001	0.0005
1		3.08	6.31	12.71	31.82	63.66	318.31	636.62
2		1.89	2.92	4.30	6.96	9.92	22.33	31.60
3		1.64	2.35	3.18	4.54	5.84	10.21	12.92
4		1.53	2.13	2.78	3.75	4.60	7.17	8.61
5		1.48	2.02	2.57	3.36	4.03	5.89	6.87
6		1.44	1.94	2.45	3.14	3.71	5.21	5.96
7		1.41	1.89	2.36	3.00	3.50	4.79	5.41
8		1.40	1.86	2.31	2.90	3.36	4.50	5.04
9		1.38	1.83	2.26	2.82	3.25	4.30	4.78
10		1.37	1.81	2.23	2.76	3.17	4.14	4.59
11		1.36	1.80	2.20	2.72	3.11	4.02	4.44
12		1.36	1.78	2.18	2.68	3.05	3.93	4.32
13		1.35	1.77	2.16	2.65	3.01	3.85	4.22
14		1.35	1.76	2.14	2.62	2.98	3.79	4.14
15		1.34	1.75	2.13	2.60	2.95	3.73	4.07
16		1.34	1.75	2.12	2.58	2.92	3.69	4.01
17		1.33	1.74	2.11	2.57	2.90	3.65	3.97
18		1.33	1.73	2.10	2.55	2.88	3.61	3.92
19		1.33	1.73	2.09	2.54	2.86	3.58	3.88
20		1.33	1.72	2.09	2.53	2.85	3.55	3.85
21		1.32	1.72	2.08	2.52	2.83	3.53	3.82
22		1.32	1.72	2.07	2.51	2.82	3.50	3.79
23		1.32	1.71	2.07	2.50	2.81	3.48	3.77
24		1.32	1.71	2.06	2.49	2.80	3.47	3.75
25		1.32	1.71	2.06	2.49	2.79	3.45	3.73
26		1.31	1.71	2.06	2.48	2.78	3.43	3.71
27		1.31	1.70	2.05	2.47	2.77	3.42	3.69
28		1.31	1.70	2.05	2.47	2.76	3.41	3.67
29		1.31	1.70	2.05	2.46	2.76	3.40	3.66
30		1.31	1.70	2.04	2.46	2.75	3.39	3.65
40		1.30	1.68	2.02	2.42	2.70	3.31	3.55
60		1.30	1.67	2.00	2.39	2.66	3.23	3.46
120		1.29	1.66	1.98	2.36	2.62	3.16	3.37
$\infty$		1.28	1.64	1.96	2.33	2.58	3.09	3.29

**Tabell 4.  $\chi^2$ -fördelningen**

$P(X > \chi^2_\alpha(f)) = \alpha$  där  $X \in \chi^2(f)$



$f$	$\alpha$	0.9995	0.999	0.995	0.99	0.975	0.95	0.05	0.025	0.01	0.005	0.001	0.0005
1		0.00	0.00	0.00	0.00	0.00	0.00	3.84	5.02	6.63	7.88	10.83	12.12
2		0.00	0.00	0.01	0.02	0.05	0.10	5.99	7.38	9.21	10.60	13.82	15.20
3		0.02	0.02	0.07	0.11	0.22	0.35	7.81	9.35	11.34	12.84	16.27	17.73
4		0.06	0.09	0.21	0.30	0.48	0.71	9.49	11.14	13.28	14.86	18.47	20.00
5		0.16	0.21	0.41	0.55	0.83	1.15	11.07	12.83	15.09	16.75	20.52	22.11
6		0.30	0.38	0.68	0.87	1.24	1.64	12.59	14.45	16.81	18.55	22.46	24.10
7		0.48	0.60	0.99	1.24	1.69	2.17	14.07	16.01	18.48	20.28	24.32	26.02
8		0.71	0.86	1.34	1.65	2.18	2.73	15.51	17.53	20.09	21.95	26.12	27.87
9		0.97	1.15	1.73	2.09	2.70	3.33	16.92	19.02	21.67	23.59	27.88	29.67
10		1.26	1.48	2.16	2.56	3.25	3.94	18.31	20.48	23.21	25.19	29.59	31.42
11		1.59	1.83	2.60	3.05	3.82	4.57	19.68	21.92	24.72	26.76	31.26	33.14
12		1.93	2.21	3.07	3.57	4.40	5.23	21.03	23.34	26.22	28.30	32.91	34.82
13		2.31	2.62	3.57	4.11	5.01	5.89	22.36	24.74	27.69	29.82	34.53	36.48
14		2.70	3.04	4.07	4.66	5.63	6.57	23.68	26.12	29.14	31.32	36.12	38.11
15		3.11	3.48	4.60	5.23	6.26	7.26	25.00	27.49	30.58	32.80	37.70	39.72
16		3.54	3.94	5.14	5.81	6.91	7.96	26.30	28.85	32.00	34.27	39.25	41.31
17		3.98	4.42	5.70	6.41	7.56	8.67	27.59	30.19	33.41	35.72	40.79	42.88
18		4.44	4.90	6.26	7.01	8.23	9.39	28.87	31.53	34.81	37.16	42.31	44.43
19		4.91	5.41	6.84	7.63	8.91	10.12	30.14	32.85	36.19	38.58	43.82	45.97
20		5.40	5.92	7.43	8.26	9.59	10.85	31.41	34.17	37.57	40.00	45.31	47.50
21		5.90	6.45	8.03	8.90	10.28	11.59	32.67	35.48	38.93	41.40	46.80	49.01
22		6.40	6.98	8.64	9.54	10.98	12.34	33.92	36.78	40.29	42.80	48.27	50.51
23		6.92	7.53	9.26	10.20	11.69	13.09	35.17	38.08	41.64	44.18	49.73	52.00
24		7.45	8.08	9.89	10.86	12.40	13.85	36.42	39.36	42.98	45.56	51.18	53.48
25		7.99	8.65	10.52	11.52	13.12	14.61	37.65	40.65	44.31	46.93	52.62	54.95
26		8.54	9.22	11.16	12.20	13.84	15.38	38.89	41.92	45.64	48.29	54.05	56.41
27		9.09	9.80	11.81	12.88	14.57	16.15	40.11	43.19	46.96	49.64	55.48	57.86
28		9.66	10.39	12.46	13.56	15.31	16.93	41.34	44.46	48.28	50.99	56.89	59.30
29		10.23	10.99	13.12	14.26	16.05	17.71	42.56	45.72	49.59	52.34	58.30	60.73
30		10.80	11.59	13.79	14.95	16.79	18.49	43.77	46.98	50.89	53.67	59.70	62.16
40		16.91	17.92	20.71	22.16	24.43	26.51	55.76	59.34	63.69	66.77	73.40	76.09
50		23.46	24.67	27.99	29.71	32.36	34.76	67.50	71.42	76.15	79.49	86.66	89.56
60		30.34	31.74	35.53	37.48	40.48	43.19	79.08	83.30	88.38	91.95	99.61	102.69
70		37.47	39.04	43.28	45.44	48.76	51.74	90.53	95.02	100.43	104.21	112.32	115.58
80		44.79	46.52	51.17	53.54	57.15	60.39	101.88	106.63	112.33	116.32	124.84	128.26
90		52.28	54.16	59.20	61.75	65.65	69.13	113.15	118.14	124.12	128.30	137.21	140.78
100		59.90	61.92	67.33	70.06	74.22	77.93	124.34	129.56	135.81	140.17	149.45	153.17







**Tabell 6. Binomialfördelningen** $P(X \leq x)$  där  $X \in \text{Bin}(n, p)$ För  $p > 1/2$ , utnyttja att  $P(X \leq x) = P(Y \geq n - x)$  där  $Y \in \text{Bin}(n, 1 - p)$ 

$n$	$x$	$p$	0.05	0.10	0.15	0.20	0.25	0.30	0.40	0.50
2	0		0.90250	0.81000	0.72250	0.64000	0.56250	0.49000	0.36000	0.25000
	1		0.99750	0.99000	0.97750	0.96000	0.93750	0.91000	0.84000	0.75000
3	0		0.85737	0.72900	0.61412	0.51200	0.42188	0.34300	0.21600	0.12500
	1		0.99275	0.97200	0.93925	0.89600	0.84375	0.78400	0.64800	0.50000
	2		0.99987	0.99900	0.99663	0.99200	0.98438	0.97300	0.93600	0.87500
4	0		0.81451	0.65610	0.52201	0.40960	0.31641	0.24010	0.12960	0.06250
	1		0.98598	0.94770	0.89048	0.81920	0.73828	0.65170	0.47520	0.31250
	2		0.99952	0.99630	0.98802	0.97280	0.94922	0.91630	0.82080	0.68750
	3		0.99999	0.99990	0.99949	0.99840	0.99609	0.99190	0.97440	0.93750
5	0		0.77378	0.59049	0.44371	0.32768	0.23730	0.16807	0.07776	0.03125
	1		0.97741	0.91854	0.83521	0.73728	0.63281	0.52822	0.33696	0.18750
	2		0.99884	0.99144	0.97339	0.94208	0.89648	0.83692	0.68256	0.50000
	3		0.99997	0.99954	0.99777	0.99328	0.98437	0.96922	0.91296	0.81250
	4		1.00000	0.99999	0.99992	0.99968	0.99902	0.99757	0.98976	0.96875
6	0		0.73509	0.53144	0.37715	0.26214	0.17798	0.11765	0.04666	0.01563
	1		0.96723	0.88574	0.77648	0.65536	0.53394	0.42018	0.23328	0.10938
	2		0.99777	0.98415	0.95266	0.90112	0.83057	0.74431	0.54432	0.34375
	3		0.99991	0.99873	0.99411	0.98304	0.96240	0.92953	0.82080	0.65625
	4		1.00000	0.99995	0.99960	0.99840	0.99536	0.98906	0.95904	0.89063
	5		1.00000	1.00000	0.99999	0.99994	0.99976	0.99927	0.99590	0.98438
7	0		0.69834	0.47830	0.32058	0.20972	0.13348	0.08235	0.02799	0.00781
	1		0.95562	0.85031	0.71658	0.57672	0.44495	0.32942	0.15863	0.06250
	2		0.99624	0.97431	0.92623	0.85197	0.75641	0.64707	0.41990	0.22656
	3		0.99981	0.99727	0.98790	0.96666	0.92944	0.87396	0.71021	0.50000
	4		0.99999	0.99982	0.99878	0.99533	0.98712	0.97120	0.90374	0.77344
	5		1.00000	0.99999	0.99993	0.99963	0.99866	0.99621	0.98116	0.93750
	6		1.00000	1.00000	1.00000	0.99999	0.99994	0.99978	0.99836	0.99219
8	0		0.66342	0.43047	0.27249	0.16777	0.10011	0.05765	0.01680	0.00391
	1		0.94276	0.81310	0.65718	0.50332	0.36708	0.25530	0.10638	0.03516
	2		0.99421	0.96191	0.89479	0.79692	0.67854	0.55177	0.31539	0.14453
	3		0.99963	0.99498	0.97865	0.94372	0.88618	0.80590	0.59409	0.36328
	4		0.99998	0.99957	0.99715	0.98959	0.97270	0.94203	0.82633	0.63672
	5		1.00000	0.99998	0.99976	0.99877	0.99577	0.98871	0.95019	0.85547
	6		1.00000	1.00000	0.99999	0.99992	0.99962	0.99871	0.99148	0.96484
	7		1.00000	1.00000	1.00000	1.00000	0.99998	0.99993	0.99934	0.99609
9	0		0.63025	0.38742	0.23162	0.13422	0.07508	0.04035	0.01008	0.00195
	1		0.92879	0.77484	0.59948	0.43621	0.30034	0.19600	0.07054	0.01953
	2		0.99164	0.94703	0.85915	0.73820	0.60068	0.46283	0.23179	0.08984
	3		0.99936	0.99167	0.96607	0.91436	0.83427	0.72966	0.48261	0.25391
	4		0.99997	0.99911	0.99437	0.98042	0.95107	0.90119	0.73343	0.50000
	5		1.00000	0.99994	0.99937	0.99693	0.99001	0.97471	0.90065	0.74609
	6		1.00000	1.00000	0.99995	0.99969	0.99866	0.99571	0.97497	0.91016
	7		1.00000	1.00000	1.00000	0.99998	0.99989	0.99957	0.99620	0.98047
	8		1.00000	1.00000	1.00000	1.00000	1.00000	0.99998	0.99974	0.99805

Tabell 6 forts.

$n$	$x$	$p$	0.05	0.10	0.15	0.20	0.25	0.30	0.40	0.50
10	0	0.59874	0.34868	0.19687	0.10737	0.05631	0.02825	0.00605	0.00098	
	1	0.91386	0.73610	0.54430	0.37581	0.24403	0.14931	0.04636	0.01074	
	2	0.98850	0.92981	0.82020	0.67780	0.52559	0.38278	0.16729	0.05469	
	3	0.99897	0.98720	0.95003	0.87913	0.77588	0.64961	0.38228	0.17188	
	4	0.99994	0.99837	0.99013	0.96721	0.92187	0.84973	0.63310	0.37695	
	5	1.00000	0.99985	0.99862	0.99363	0.98027	0.95265	0.83376	0.62305	
	6	1.00000	0.99999	0.99987	0.99914	0.99649	0.98941	0.94524	0.82813	
	7	1.00000	1.00000	0.99999	0.99992	0.99958	0.99841	0.98771	0.94531	
	8	1.00000	1.00000	1.00000	1.00000	0.99997	0.99986	0.99832	0.98926	
9	1.00000	1.00000	1.00000	1.00000	1.00000	0.99999	0.99990	0.99902		
11	0	0.56880	0.31381	0.16734	0.08590	0.04224	0.01977	0.00363	0.00049	
	1	0.89811	0.69736	0.49219	0.32212	0.19710	0.11299	0.03023	0.00586	
	2	0.98476	0.91044	0.77881	0.61740	0.45520	0.31274	0.11892	0.03271	
	3	0.99845	0.98147	0.93056	0.83886	0.71330	0.56956	0.29628	0.11328	
	4	0.99989	0.99725	0.98411	0.94959	0.88537	0.78970	0.53277	0.27441	
	5	0.99999	0.99970	0.99734	0.98835	0.96567	0.92178	0.75350	0.50000	
	6	1.00000	0.99998	0.99968	0.99803	0.99244	0.97838	0.90065	0.72559	
	7	1.00000	1.00000	0.99997	0.99976	0.99881	0.99571	0.97072	0.88672	
	8	1.00000	1.00000	1.00000	0.99998	0.99987	0.99942	0.99408	0.96729	
	9	1.00000	1.00000	1.00000	1.00000	0.99999	0.99995	0.99927	0.99414	
10	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99996	0.99951		
12	0	0.54036	0.28243	0.14224	0.06872	0.03168	0.01384	0.00218	0.00024	
	1	0.88164	0.65900	0.44346	0.27488	0.15838	0.08503	0.01959	0.00317	
	2	0.98043	0.88913	0.73582	0.55835	0.39068	0.25282	0.08344	0.01929	
	3	0.99776	0.97436	0.90779	0.79457	0.64878	0.49252	0.22534	0.07300	
	4	0.99982	0.99567	0.97608	0.92744	0.84236	0.72366	0.43818	0.19385	
	5	0.99999	0.99946	0.99536	0.98059	0.94560	0.88215	0.66521	0.38721	
	6	1.00000	0.99995	0.99933	0.99610	0.98575	0.96140	0.84179	0.61279	
	7	1.00000	1.00000	0.99993	0.99942	0.99722	0.99051	0.94269	0.80615	
	8	1.00000	1.00000	0.99999	0.99994	0.99961	0.99831	0.98473	0.92700	
	9	1.00000	1.00000	1.00000	1.00000	0.99996	0.99979	0.99719	0.98071	
	10	1.00000	1.00000	1.00000	1.00000	1.00000	0.99998	0.99968	0.99683	
11	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99998	0.99976		
13	0	0.51334	0.25419	0.12091	0.05498	0.02376	0.00969	0.00131	0.00012	
	1	0.86458	0.62134	0.39828	0.23365	0.12671	0.06367	0.01263	0.00171	
	2	0.97549	0.86612	0.69196	0.50165	0.33260	0.20248	0.05790	0.01123	
	3	0.99690	0.96584	0.88200	0.74732	0.58425	0.42061	0.16858	0.04614	
	4	0.99971	0.99354	0.96584	0.90087	0.79396	0.65431	0.35304	0.13342	
	5	0.99998	0.99908	0.99247	0.96996	0.91979	0.83460	0.57440	0.29053	
	6	1.00000	0.99990	0.99873	0.99300	0.97571	0.93762	0.77116	0.50000	
	7	1.00000	0.99999	0.99984	0.99875	0.99435	0.98178	0.90233	0.70947	
	8	1.00000	1.00000	0.99998	0.99983	0.99901	0.99597	0.96792	0.86658	
	9	1.00000	1.00000	1.00000	0.99998	0.99987	0.99935	0.99221	0.95386	
	10	1.00000	1.00000	1.00000	1.00000	0.99999	0.99993	0.99868	0.98877	
	11	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99986	0.99829	
12	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.99999	0.99988		





