

Psicometria I - Formulario

$$PosMe = \frac{N+1}{2}$$

$$\bar{X} = \frac{\sum X_i}{N}$$

$$PosMe = \frac{N}{2}$$

$$\bar{X} = \frac{\sum f_i \cdot X_i}{N}$$

$$Me = X_{II} + \frac{PosMe - f_{IIcum}}{f_i} \cdot (i)$$

$$\bar{X} = \frac{\sum f_i X_c}{N}$$

$$PosQ_j = \frac{(N+1) \cdot j}{4}$$

$$PosD_j = \frac{(N+1) \cdot j}{10}$$

$$PosP_j = \frac{(N+1) \cdot j}{100}$$

$$PosQ_i = \frac{N \cdot j}{4}$$

$$PosD_j = \frac{N \cdot j}{10}$$

$$PosP_j = \frac{N \cdot j}{100}$$

$$Q_j = X_{II} + \frac{PosQ_j - f_{IIcum}}{f_i} \cdot (i)$$

$$D_j = X_{II} + \frac{PosD_j - f_{IIcum}}{f_i} \cdot (i)$$

$$P_j = X_{II} + \frac{PosP_j - f_{IIcum}}{f_i} \cdot (i)$$

$$RV = 1 - \frac{f_{MODA}}{N}$$

$$CV = X_{\max} - X_{\min} + 1$$

$$s^2 = \frac{\sum (X_i)^2}{N} - (\bar{X})^2$$

$$s = \sqrt{\frac{\sum X_i^2}{N} - (\bar{X})^2}$$

$$ID = 1 - \sum_{i=1}^k p_i^2$$

$$DI = Q_3 - Q_1$$

$$s^2 = \frac{\sum f_i \cdot X_i^2}{N} - (\bar{X})^2$$

$$s = \sqrt{\frac{\sum f_i \cdot X_i^2}{N} - (\bar{X})^2}$$

$$SSM = \frac{\sum |(X_i - \bar{X})|}{N}$$

$$IVQ = \frac{ID}{1 - \frac{1}{k}}$$

$$SI = \frac{Q_3 - Q_1}{2}$$

$$s^2 = \frac{\sum f_i \cdot X_c^2}{N} - (\bar{X})^2$$

$$s = \sqrt{\frac{\sum f_i \cdot X_c^2}{N} - (\bar{X})^2}$$

$$z_i = \frac{x_i - \mu}{\sigma}$$

$$X_i = z_i \cdot \sigma + \mu$$

$$T = 50 + 10 \cdot z_i$$

$$QI_{dev} = 100 + 15 \cdot z_i$$

$$Sten = 5,5 + 2 \cdot z_i$$

$$Stenine = 5 + 2 \cdot z_i$$

$$RP(X_i) = \frac{PosP_X \cdot 100}{N+1}$$

$$PosP_X = f_{11cum} + \frac{X_i - X_{11}}{i} \cdot f_i$$

$$r_{xy} = \frac{\sum X_i \cdot Y_i - \frac{\sum X_i \cdot \sum Y_i}{N}}{\sqrt{\left[\sum X_i^2 - \frac{(\sum X_i)^2}{N} \right] \cdot \left[\sum Y_i^2 - \frac{(\sum Y_i)^2}{N} \right]}}$$

$$r_{xy} = \frac{N \cdot \sum X_i \cdot Y_i - \sum X_i \cdot \sum Y_i}{\sqrt{\left[N \cdot \sum X_i^2 - (\sum X_i)^2 \right] \cdot \left[N \cdot \sum Y_i^2 - (\sum Y_i)^2 \right]}}$$

$$r_s = 1 - \frac{6 \cdot \sum d_i^2}{N \cdot (N^2 - 1)}$$

$$\tau = \frac{S}{\sqrt{\left(\frac{1}{2} \cdot N \cdot (N-1) - T_x \right) \cdot \left(\frac{1}{2} \cdot N \cdot (N-1) - T_y \right)}}$$

$$\tau = \frac{S}{\frac{1}{2} \cdot N \cdot (N-1)}$$

$$T_x = \frac{1}{2} \cdot \sum_i t_{xi} \cdot (t_{xi} - 1)$$

$$T_y = \frac{1}{2} \cdot \sum_i t_{yi} \cdot (t_{yi} - 1)$$

$$r_{pb} = \frac{\bar{X}_a - \bar{X}_b}{S_{tot}} \cdot \sqrt{\frac{N_a}{N} \cdot \frac{N_b}{N}}$$

$$r_{phi} = \frac{(f_a \cdot f_d) - (f_b \cdot f_c)}{\sqrt{(p \cdot p') \cdot (q \cdot q')}}}$$

$$Cov_{xy} = \frac{\sum [(X_i - \bar{X}) \cdot (Y_i - \bar{Y})]}{N}$$

$$Y' = a + b \cdot X_i$$

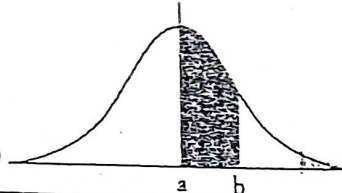
$$b = \frac{\sum (X_i - \bar{X}) \cdot (Y_i - \bar{Y})}{\sum (X_i - \bar{X})^2}$$

$$b = \frac{N \cdot \sum X_i \cdot Y_i - \sum X_i \cdot \sum Y_i}{N \cdot \sum X_i^2 - (\sum X_i)^2}$$

$$a = \bar{Y} - \beta \cdot \bar{X}$$

$$a = \frac{(\sum Y_i - b \cdot \sum X_i)}{N}$$

$$var_{residua} = 1 - r^2$$

TAV. B. Aree della distribuzione normale standard tra $a = 0$ e $b > 0$ 

z	0	1	2	3	4	5	6	7	8	9
0.0	.0000	.0040	.0080	.0120	.0160	.0199	.0239	.0279	.0319	.0359
0.1	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0754
0.2	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.3	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.4	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.5	.1915	.1950	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.6	.2258	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2518	.2549
0.7	.2580	.2612	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.8	.2881	.2910	.2939	.2967	.2996	.3023	.3051	.3078	.3106	.3133
0.9	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.1	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.2	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.3	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.4	.4192	.4207	.4222	.4236	.4351	.4265	.4279	.4292	.4306	.4319
1.5	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4429	.4441
1.6	.4452	.4463	.4474	.4484	.4495	.4505	.4515	.4525	.4535	.4545
1.7	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.8	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.9	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4761	.4767
2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.1	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.2	.4861	.4864	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.3	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.4	.4918	.4920	.4922	.4925	.4927	.4929	.4931	.4932	.4934	.4936
2.5	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.6	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4964
2.7	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.8	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4979	.4980	.4981
2.9	.4981	.4982	.4982	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.0	.4987	.4987	.4987	.4988	.4988	.4989	.4989	.4989	.4990	.4990
3.1	.4990	.4991	.4991	.4991	.4992	.4992	.4992	.4992	.4993	.4993
3.2	.4993	.4993	.4994	.4994	.4994	.4994	.4994	.4995	.4995	.4995
3.3	.4995	.4995	.4995	.4996	.4996	.4996	.4996	.4996	.4996	.4997
3.4	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4998
3.5	.4998	.4998	.4998	.4998	.4998	.4998	.4998	.4998	.4998	.4998
3.6	.4998	.4998	.4999	.4999	.4999	.4999	.4999	.4999	.4999	.4999
3.7	.4999	.4999	.4999	.4999	.4999	.4999	.4999	.4999	.4999	.4999
3.8	.4999	.4999	.4999	.4999	.4999	.4999	.4999	.4999	.4999	.4999
3.9	.5000	.5000	.5000	.5000	.5000	.5000	.5000	.5000	.5000	.5000