

6	30	41
7	90	80
8	61	76
9	35	40
10	48	50

25.某测验在标准化样组上的平均成绩是 75 分,标准差是 8 分,样组内某学生的标准分数是 1.5,那么他的原始分数是多少?

26.已知某总体服从正态分布,总体标准差为 15,从中随机抽取一个 $n=25$ 的样本,其样本平均数远离总体平均数 5 以上的概率是否小于 0.05?(正态分布表见本试卷附录)

五、综合题(本大题共 2 小题,请任选 1 小题作答,全答者只按前 1 小题评分,每小题 10 分,共 10 分)

27.随机抽取某班思维测试成绩,请计算 \bar{X} 和思维成绩 50 分的百分位数,并说明其实际涵义。成绩为: 20, 20, 30, 35, 40, 59, 36, 37, 33, 35, 38, 29, 40, 50, 60, 70, 70, 75, 80, 90。

28.两组年龄不同的女性对日常化妆问题发表意见,其结果如下表所示,试问:在日常化妆问题上,年龄与态度之间是否具有连带关系?($\alpha=0.05$)

年龄	好	不好	合计
40 岁以下	75	27	102
40 岁以上	14	16	30
合计	89	43	132

$$\left(\text{附 } \chi^2 = \frac{n(ad-bc)^2}{(a+b)(c+d)(a+c)(b+d)} \right) \left(\chi^2 \text{ 分布临界值 } \chi_a^2 \text{ 表见本试卷附录} \right)$$

六、论述题(本大题共 12 分)

29.为什么百分等级分数不是等单位量度?其使用局限性体现在哪些方面?

附录:

χ^2 分布临界值 χ^2_α 表

$$p(\chi^2 > \chi^2_\alpha) = \alpha$$

$df \backslash \alpha$.99	.98	.95	.90	.80	.70	.50	.30	.20	.10	.05	.02	.01	.001
1	0.03157	0.03628	0.03993	0.0158	0.0642	0.148	0.455	1.074	1.642	2.706	3.841	5.412	6.635	10.828
2	0.0201	0.0404	0.103	0.211	0.446	0.713	1.386	2.408	3.219	4.605	5.991	7.824	9.210	13.816
3	0.115	0.185	0.352	0.584	1.005	1.424	2.366	3.665	4.642	6.251	7.815	9.837	11.345	16.266
4	0.297	0.429	0.711	1.064	1.649	2.195	3.357	4.878	5.989	7.779	9.488	11.668	12.777	18.467
5	0.554	0.752	1.145	1.610	2.343	3.000	4.351	6.064	7.289	9.236	11.070	13.388	15.068	20.515
6	0.872	1.134	1.635	2.204	3.070	3.828	5.348	7.231	8.558	10.645	12.592	15.033	16.812	22.458
7	1.239	1.564	2.167	2.833	3.822	4.671	6.346	8.383	9.803	12.017	14.067	16.622	18.475	24.322
8	1.646	2.032	2.733	3.490	4.594	5.527	7.344	9.524	11.030	13.362	15.507	18.168	20.090	26.125
9	2.088	2.532	3.325	4.168	5.380	6.393	8.343	10.656	12.242	14.684	16.919	19.679	21.666	27.877
10	2.558	3.059	3.940	4.865	6.179	7.267	9.342	11.781	13.442	15.987	18.307	21.161	23.209	29.588

正态分布表

Z	Y	P	Z	Y	P	Z	Y	P
1.10	.21785	.36433	1.50	.12952	.43319	1.90	.06562	.47128
1.11	.21546	.36650	1.51	.12758	.43448	1.91	.06439	.47193
1.12	.21307	.36864	1.52	.12566	.43574	1.92	.06316	.47257
1.13	.21069	.37076	1.53	.12376	.43699	1.93	.06195	.47320
1.14	.20831	.37286	1.54	.12188	.43822	1.94	.06077	.47381
1.15	.20594	.37493	1.55	.12001	.43943	1.95	.05959	.47441
1.16	.20357	.37698	1.56	.11816	.44062	1.96	.05844	.47500
1.17	.20121	.37900	1.57	.11632	.44179	1.97	.05730	.47558
1.18	.19886	.38100	1.58	.11450	.44295	1.98	.05618	.47615
1.19	.19652	.38298	1.59	.11270	.44408	1.99	.05508	.47670
1.20	.19419	.38493	1.60	.11092	.44520	2.00	.05399	.47725
1.21	.19186	.38686	1.61	.10915	.44630	2.01	.05292	.47778
1.22	.18954	.38877	1.62	.10741	.44738	2.02	.05186	.47831
1.23	.18724	.39065	1.63	.10567	.44845	2.03	.05082	.47882
1.24	.18494	.39251	1.64	.10396	.44950	2.04	.04980	.47982
1.25	.18265	.39435	1.65	.10226	.45053	2.05	.04879	.47982
1.26	.18037	.39617	1.66	.10059	.45154	2.06	.04780	.48030
1.27	.17810	.39796	1.67	.09893	.45254	2.07	.04682	.48077
1.28	.17585	.39973	1.68	.09728	.45352	2.08	.04586	.48124
1.29	.17360	.40147	1.69	.09566	.45449	2.09	.04491	.48169