Inverse Normal Table

0.50	0.0000	**0.30**	0.5244	**0.10**	1.2816
0.49	0.0251	**0.29**	0.5534	**0.09**	1.3408
0.48	0.0502	**0.28**	0.5828	**0.08**	1.4051
0.47	0.0753	**0.27**	0.6128	**0.07**	1.4758
0.46	0.1004	**0.26**	0.6433	**0.06**	1.5548
0.45	0.1257	**0.25**	0.6745	**0.05**	1.6449
0.44	0.1510	**0.24**	0.7063	**0.04**	1.7507
0.43	0.1764	**0.23**	0.7388	**0.03**	1.8808
0.42	0.2019	**0.22**	0.7722	**0.025**	1.9600
0.41	0.2275	**0.21**	0.8064	**0.02**	2.0537
0.40	0.2533	**0.20**	0.8416	**0.01**	2.3263
0.39	0.2793	**0.19**	0.8779	**0.009**	2.3656
0.38	0.3055	**0.18**	0.9154	**0.008**	2.4089
0.37	0.3319	**0.17**	0.9542	**0.007**	2.4573
0.36	0.3585	**0.16**	0.9945	**0.006**	2.5121
0.35	0.3853	**0.15**	1.0364	**0.005**	2.5758
0.34	0.4125	**0.14**	1.0803	**0.004**	2.6521
0.33	0.4399	**0.13**	1.1264	**0.003**	2.7478
0.32	0.4677	**0.12**	1.1750	**0.002**	2.8782
0.31	0.4959	**0.11**	1.2265	**0.001**	3.0902

1.3.6 Hypothesis testing

Neyman-Pearson approach

Null hypothesis: observed deviation from assumed distribution is by chance

Alternative hypothesis: observed deviation is not by chance

Type-I error happens if valid H0 is rejected and its maximum allowed probability is called *significance level* of the test denoted by α.

Type-II error happens if invalid H0 is accepted and probability of rejecting an invalid H0 is called power of the test.

Probability of obtaining observed results under the assumption that H0 is correct is called *p-value*.

What is the p-value of coin being not biased if 8 heads are observed in 10 tosses? (Use Normal or binomial distribution)

What are the chances that the coin is not biased if 8 heads are observed in 10 tosses when it is known that if biased, the probability of heads is 0.7? (Use binomial distribution)