

Question 1

For the following data find the chi-square distribution where $\hat{\sigma}^2 = 42.1591$ and $df = 8$. Test the hypothesis that $\sigma^2 = 85$ against $\sigma^2 \neq 85$ at $\alpha = 5\%$ level of significance.

Question 2

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For the following data test $\beta_2 = 0$.

X	Y
34	120
37	130
39	135
42	138
41	142
45	149
40	155
52	158
50	160
62	169

Question 3

financial capital of 30 enterprises (in million US\$)

56	58	60	64	54	52	50	40	57	53
65	50	53	52	66	45	55	54	65	56
55	57	48	63	51	55	44	58	54	60

Are those data follow normal distribution? Using $\alpha = 0,05$.