PRACTICAL NO. 1

STATEMENT: FIND THE MEAN, STANDARD DEVIATION AND CONFIDENCE INTERVAL OF MEAN ASSUMING NORMAL DISTRIBUTION FOR RANDOM DATA OF 100 SAMPLE THAT GIVEN BELOW.

96	76	94	87	27	58	98	59	41	23
54	61	76	25	85	80	39	22	56	6
4	18	20	44	56	13	82	37	26	75
15	94	42	65	29	28	16	27	96	89
85	48	87	93	67	56	81	53	81	80
100	97	75	29	91	83	38	16	44	89
1	31	65	77	39	34	66	69	24	53
99	51	36	75	78	95	74	95	34	77
35	85	38	75	31	85	63	96	63	6
6	3	12	28	16	90	68	59	61	87

WORKING EXPRESSION

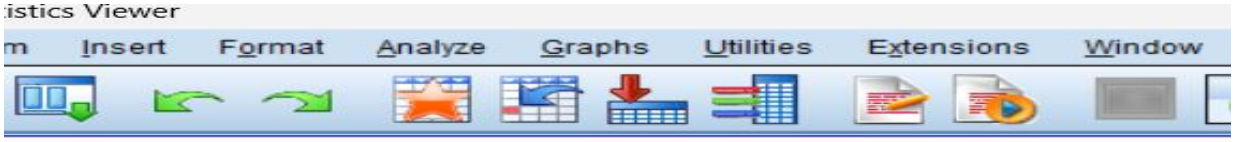
Sample Mean = $\frac{\sum x}{n-1}$; where n = sample size

X = Individual data points in the sample

Sample Standard Deviation = $\sqrt{\frac{\sum(x-\bar{x})(x-\bar{x})}{n-1}}$

Confidence Interval = $\bar{x} \pm Z_{\alpha/2} * \frac{\sigma}{\sqrt{n-1}}$

CALCULATION



Descriptives

			Statistic	Std. Error
V1	Mean		56.09	2.895
	95% Confidence Interval for Mean	Lower Bound	50.35	
		Upper Bound	61.83	
	5% Trimmed Mean		56.66	
	Median		59.00	
	Variance		838.224	
	Std. Deviation		28.952	
	Minimum		1	
	Maximum		100	
	Range		99	
	Interquartile Range		52	
	Skewness		-.206	.241
	Kurtosis		-1.226	.478

RESULT

Hence the Sample mean is 56.09, Standard Deviation is 28.952 and the confidence interval is (50.35, 61.83).

CONCLUSION

Therefore, we can calculate sample mean, sample standard deviation and confidence intervals by use SPSS software.