

Premedical course

MINITAB practical 6

1. Twenty-five children who had been exposed to particularly high levels of lead had their IQ assessed with the following results:

100	112	76	97	81
85	100	89	106	106
96	113	91	90	99
99	92	115	97	97
94	86	89	72	104

The assessment is designed so that the mean in the population is 100. Test this group for a difference from the population mean. Also provide confidence limits for the exposed children's mean. Do you think 25 children is the right size of sample? Why?

2. A group of men had their serum cholesterol measured before and after undergoing treatment which may or may not be able to change it. Analyse and interpret the data. (Results are in mmol/l)

Before	8.1	9.0	7.6	8.3	7.5	8.9	8.0	8.0	8.4	7.7	8.1
After	8.0	8.6	7.7	7.7	7.7	8.5	8.3	8.1	7.9	7.2	7.8

3. An experiment compared the ability of two media to grow colonic mucosa by counting the proliferating cells per intestinal crypt. Analyse and interpret the results.

Medium A

Total cells	520	502	509	501	510	520	528	504	510	515
Proliferating cells	172	140	147	166	132	168	155	149	159	140

Medium B

Total cells	500	522	514	503	530	517	515	521	521	506
Proliferating calls	144	129	152	160	136	141	118	162	150	141