

Unpaired and Paired t-Tests

Mr Arthur gives his two chemistry groups the same test. He wants to find out if there is any difference between the achievement levels of the two groups.

The results are:

Group 1	54	62	67	43	85	69	73	81	47	92	55	59	68	72
Group 2	73	67	58	46	91	48	82	81	67	74	57	66		

- Write down the null and alternative hypotheses.
- Perform a t -test at the 5% significance level.
- Write down the conclusion to the test.

Five candidates attended a revision course hoping to improve their chemistry grades. They were tested before the course started and again at the end of the course. The results were as follows.

Candidate	1	2	3	4	5
Score before course	64	43	29	56	61
Score after course	72	60	33	55	62

Determine at the 5% level whether the course improved the candidates' performance in their chemistry tests.

