

1. Data points from a standard moisture–density test on a fine-grained soil are given in the following table:

Water Content (%)	Total Density (pcf)
20.0	99.6
23.1	105.9
25.6	111.2
28.5	115.1
31.3	113.4
34.0	111.5

Reduce the data and plot the water content versus dry density curve. Clearly indicate values for optimum water content and maximum dry density from this test.

2. A new employee compacted one cylinder of the soil described in Problem 1 to compare new results with those shown. The data obtained included a water content of 32.5% and a total density of 121.9 pcf. Comment on these new findings.