

To create a longitudinal profile, start by setting up the level and taking a backsight to the benchmark. Measure and mark points along the desired line, taking staff readings at each point and recording them as IS/FS. Tabulate this data and reduce the levels. Next, set up the level at station A and take a reading at a perpendicular distance of 20 meters (A1), then take additional readings at 4-meter intervals between the level and A1. Repeat this procedure on the opposite side of the instrument (A10 to A6). Relocate the level to station B and repeat the process for stations C through G. Summarize the data and calculations in a table and draw the longitudinal and cross-sectional profiles at appropriate scales.