Information Collected

In order to decide what measurements were necessary I studied the similarities and differences between the two alternative routes. On either route, I first walk to 86th Street and catch the first train. At the 149th Street stop the two routes differ. On the 4 train I continue to 161st Street and then walk to school. For the 5 train I get off at 149th Street and catch the bus to Grand Concourse and 163rd Street, from which point I walk the short remaining distance to school (part of the same walk as when taking the 4 train). Since I want to compare the differences in the two routes, I identified the following four points in my travel (which are also the column headings in Appendix A: Travel Log Raw Data).

Time Collection Point Description [*insert your descriptions below*]

149th Street

161st Street (4 Train only)

Catch the bus (5 Train only)

163rd St & Grand Concourse

*Method of data collection:* Each day I took the first train that came and used my cell phone to determine the exact time of each of the Time Collection Points, to an accuracy of one second. I recorded the times in a log, which is reproduced in Appendix A: Travel Log Raw Data. I collected times for 19 trips on each route.

From the complete set of raw data shown in Appendix A, the Total Travel Time durations for the 38 trips are summarized in table 1, below. The times have been sorted from least to greatest. This is the data that is analyzed in the next section to answer the question of which is the superior route.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Table 1  Total Travel Times (seconds), sorted in increasing order | | | | | |
|  | 4 Train plus Walk |  |  |  | 5 Train plus Bus |
| 1 | 843 |  |  | 1 | 447 |
| 2 | 848 |  |  | 2 | 461 |
| 3 | 851 |  |  | 3 | 494 |
| 4 | 854 |  |  | 4 | 557 |
| 5 | 866 |  |  | 5 | 568 |
| 6 | 868 |  |  | 6 | 587 |
| 7 | 887 |  |  | 7 | 630 |
| 8 | 891 |  |  | 8 | 672 |
| 9 | 898 |  |  | 9 | 689 |
| 10 | 898 |  |  | 10 | 720 |
| 11 | 898 |  |  | 11 | 762 |
| 12 | 905 |  |  | 12 | 771 |
| 13 | 907 |  |  | 13 | 771 |
| 14 | 907 |  |  | 14 | 795 |
| 15 | 912 |  |  | 15 | 837 |
| 16 | 915 |  |  | 16 | 849 |
| 17 | 925 |  |  | 17 | 859 |
| 18 | 981 |  |  | 18 | 899 |
| 19 | 1008 |  |  | 19 | 928 |

Work Cited

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