The number of binary variables, integers and constraints for the MILP formulation and the RMIP formulation can be computed using the following equations.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| # of binaries |  |  |
| # of integers |  |  |
| # of constraints |  |  |

The results are shown are follows:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Parameters | | |  | | |  | | |
| Instances |  |  |  | Binaries | Integers | Constraints | Binaries | Integers | Constraints |
| s1-1 to  s4-10 | 20 | 10 | 4 | 12,300 | 10,000 | 26,580 | 220 | 10,000 | 20,760 |
| m1-1 to m4-5 | 40 | 30 | 4 | 193,400 | 180,000 | 423,860 | 1,240 | 180,000 | 365,820 |
| m5-1 to m8-5 | 60 | 30 | 4 | 290,100 | 270,000 | 633,540 | 1,860 | 270,000 | 546,480 |
| l1-1 to  l4-5 | 100 | 50 | 4 | 1,305,500 | 1,250,000 | 2,858,900 | 5,100 | 1,250,000 | 2,517,800 |
| week1 to 12 | 63 | 26 | 4 | 2,31,273 | 147,420 | 371,772 | 1,701 | 147,420 | 299,007 |