

# Assignment11

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
library(lpSolveAPI)
x <- read.lp("assignment11.lp")
x
```

```
## Model name:
##           x1  x2  x3  x4  x5  x6  x7
## Minimize  775 800 800 800 800 775 750
## SundayMonday    1  1  0  0  0  0  0 >= 45
## MondayTuesday   0  1  1  0  0  0  0 >= 49
## TuesdayWednesday 0  0  1  1  0  0  0 >= 48
## WednesdayThursday 0  0  0  1  1  0  0 >= 51
## ThursdayFriday   0  0  0  0  1  1  0 >= 46
## FridaySaturday   0  0  0  0  0  1  1 >= 40
## SaturdaySunday   1  0  0  0  0  0  1 >= 37
## Kind           Std Std Std Std Std Std Std
## Type           Int Int Int Int Int Int Int
## Upper          Inf Inf Inf Inf Inf Inf Inf
## Lower           0  0  0  0  0  0  0
```

```
solve(x)
```

```
## [1] 0
```

```
get.objective(x)
```

```
## [1] 124475
```

```
get.variables(x)
```

```
## [1] 18 27 22 26 25 21 19
```

The total cost is 124475 Dollars per week.

The number of workers each day of the week is 18, 27, 22, 26, 25, 21, 19 (The minimum number of viable workers each day)