```r
library(lpSolveAPI)
```

```
## Warning: package 'lpSolveAPI' was built under R version 4.0.3
```

```r
x <- read.lp("Constraints.lp")
x
```

```
## Model name:
##   a linear program with 9 decision variables and 9 constraints
```

```r
solve(x)
```

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

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

```
## [1] 708000
```

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

```
## [1] 350.0000   0.0000   0.0000 400.0000 400.0000 133.3333   0.0000 500.0000
## [9] 250.0000
```

```r
# The model gives the answers as:
# Maximum profit: $708,000.00
# Factory 1(Large): 350
# Factory 2(Large): 0
# Factory 3(Large): 0
# Factory 1(Medium): 400
# Factory 2(Medium): 400
# Factory 3(Medium): 133
# Factory 1(Small): 0
# Factory 2(Small): 500
# Factory 3(Small): 250
```