Linear-Programming.R

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```
# Objective function:
#    Minimize
#    x - 2y   = c
# Subject to constraints:
#   2x +  y  <= 40
#   2x + 3y  <= 90
#    x +  y  >= 5
```

```
# Solving using R package:
library(lpSolve)
```

```
# Assigning coefficients:
objective   <- c(1,-2)
constraints <- matrix(c(2,1,2,3,1,1),nrow=3,byrow=TRUE)
direction   <- c("<=","<=",">=")
right_side  <- c(40,90,5)
```

```
# Value of c:
lp("min",objective,constraints,direction,right_side)
```

```
## Success: the objective function is -60
```

```
# Values of x and y:
lp("min",objective,constraints,direction,right_side)$solution
```

```
## [1]  0 30
```