Transportation Model

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## R Markdown

##Create lp file  
# /\* Objective Function\*/  
# min: 622 x11 + 614 x12 + 630 x13 + 616 x21 + 620 x22 + 624 x23;  
#   
# /\*Constaints\*/  
# Plant\_A: x11 + x12 + x13 <= 100;  
# Plant\_B: x21 + x22 + x23 <= 120;  
# WH1: x11 + x21 = 80;  
# WH2: x12 + x22 = 60;  
# WH3: x13 + x23 = 70;  
  
library(lpSolveAPI)  
  
y = read.lp("transportation2.lp")  
y

## Model name:   
## x11 x12 x13 x21 x22 x23   
## Minimize 622 614 630 616 620 624   
## Plant\_A 1 1 1 0 0 0 <= 100  
## Plant\_B 0 0 0 1 1 1 <= 120  
## WH1 1 0 0 1 0 0 = 80  
## WH2 0 1 0 0 1 0 = 60  
## WH3 0 0 1 0 0 1 = 70  
## Kind Std Std Std Std Std Std   
## Type Real Real Real Real Real Real   
## Upper Inf Inf Inf Inf Inf Inf   
## Lower 0 0 0 0 0 0

solve(y)

## [1] 0

get.objective(y)

## [1] 129980

get.variables(y)

## [1] 30 60 0 50 0 70

get.constraints(y)

## [1] 90 120 80 60 70

#Min cost $129,980 # Plant A to send 30, 60, 0 to WH1,2,3 # Plant B to send 50, 0, 70 to WH1,2,3