title: “Transportation and Assignment 3” output: html_document: df_print: paged html_notebook: highlight: textmate theme: cerulean —

```
library(lpSolveAPI)
x <- read.lp("/Users/alexhaffner/Desktop/PT_Transportation.lp")
x

## Model name:
##            x11   x12   x13   x21   x22   x23   x14   x24
## Minimize   622   624   630   641   645   649   600   625
## R1           1     0     0     1     0     0     0     0  =  80
## R2           0     1     0     0     1     0     0     0  =  60
## R3           0     0     1     0     0     1     0     0  =  75
## R4           0     0     0     0     0     0     1     1  =  10
## Kind       Std   Std   Std   Std   Std   Std   Std   Std
## Type      Real  Real  Real  Real  Real  Real  Real  Real
## Upper      Inf   Inf   Inf   Inf   Inf   Inf   Inf   Inf
## Lower        0     0     0     0     0     0     0     0

solve(x)

## [1] 0

get.objective(x)

## [1] 140450

get.variables(x)

## [1] 80 60 75  0  0  0 10  0

get.constraints(x)

## [1] 80 60 75 10

get.sensitivity.objex(x)

## $objfrom
## [1] -1.00e+30 -1.00e+30 -1.00e+30  6.22e+02  6.24e+02  6.30e+02 -1.00e+30
## [8]  6.00e+02
##
## $objtill
## [1] 6.41e+02 6.45e+02 6.49e+02 1.00e+30 1.00e+30 1.00e+30 6.25e+02
1.00e+30
##
## $objfromvalue
## [1] -1.0e+30 -1.0e+30 -1.0e+30  8.0e+01  6.0e+01  7.5e+01 -1.0e+30
1.0e+01
##
## $objtillvalue
## [1] NA NA NA NA NA NA NA NA
```

```
get.sensitivity.rhs(x)
```

```
## $duals
##  [1] 622 624 630 600   0   0   0  19  21  19   0  25
##
## $dualsfrom
##  [1]  0.000000e+00  7.105427e-15  0.000000e+00  1.776357e-15 -1.000000e+30
##  [6] -1.000000e+30 -1.000000e+30 -1.000000e+30 -1.000000e+30 -1.000000e+30
## [11] -1.000000e+30 -1.000000e+30
##
## $dualstill
##  [1] 1.0e+30 1.0e+30 1.0e+30 1.0e+30 1.0e+30 1.0e+30 1.0e+30 8.0e+01
6.0e+01
## [10] 7.5e+01 1.0e+30 1.0e+01
```