Automagic R Script Compilation

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The results below are generated from an R script.

```r
# Note: This report is automatically generated with the R package knitr (version 0.2).

# Alan Arnholt
# site <-
"http://www1.appstate.edu/~arnholta/classes/STT3820/Data/CSV/Ch25_Couples_ages.csv"
couplesAge <- read.csv(file = url(site))
head(couplesAge)

WifesAge HusbandsAge
1 43 49
2 28 25
3 30 40
4 57 52
5 52 58
6 27 32

# Ok, make a data frame now
couplesAge$DIFF <- couplesAge$HusbandsAge - couplesAge$WifesAge
head(couplesAge)

WifesAge HusbandsAge DIFF
1 43 49 6
2 28 25 -3
3 30 40 10
4 57 52 -5
5 52 58 6
6 27 32 5

# Base
attach(couplesAge)
hist(DIFF)
```

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qqnorm(DIFF)
qqline(DIFF)

detach(couplesAge)
# lattice
library(lattice)
densityplot(~DIFF, data = couplesAge)

qqmath(~DIFF, data = couplesAge)
# head(couplesAge)

<table>
<thead>
<tr>
<th>Wife's Age</th>
<th>Husband's Age</th>
<th>DIFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43</td>
<td>49</td>
</tr>
<tr>
<td>2</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>57</td>
<td>52</td>
</tr>
<tr>
<td>5</td>
<td>52</td>
<td>58</td>
</tr>
<tr>
<td>6</td>
<td>27</td>
<td>32</td>
</tr>
</tbody>
</table>

# ggplot
qplot(DIFF, data = couplesAge, binwidth = 3)
#

# with(data = couplesAge, t.test(HusbandsAge, WifesAge, paired = TRUE))

Paired t-test

data:  HusbandsAge and WifesAge
t = 7.152, df = 169, p-value = 2.474e-11
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
  1.618 2.852
sample estimates:
mean of the differences 
  2.235

#
library(PASWR)
with(data = couplesAge, SIGN.test(HusbandsAge, WifesAge))

Dependent-samples Sign-Test

data:  HusbandsAge and WifesAge
S = 119, p-value = 5.589e-13
alternative hypothesis: true median difference is not equal to 0
95 percent confidence interval:
  1 3
sample estimates:
The R session information (including the OS info, R version and all packages used):

```r
sessionInfo()

R version 2.14.1 (2011-12-22)
Platform: x86_64-pc-mingw32/x64 (64-bit)
locale:
[1] C

attached base packages:

other attached packages:
[1] car_2.0-11  survival_2.36-10 nnet_7.3-1  PASWR_1.1  e1071_1.6 [6] class_7.3-3  MASS_7.3-16  knitr_0.2  ggplot2_0.8.9  proto_0.3-9.2 [11] reshape_0.8.4  plyr_1.6  lattice_0.20-0  tikzDevice_0.6.2  cacheSweave_0.6 [16] formatR_0.3-4  optparse_0.9.4  getopt_1.17  highlight_0.3.1  parser_0.0-14 [21] Rcpp_0.9.8  int64_1.1.2  codetools_0.2-8  stashR_0.3-4  filehash_2.2

loaded via a namespace (and not attached):
[1] digest_0.5.1  evaluate_0.4.1  pgfSweave_1.2.1  stringr_0.6

Sys.time()

[1] "2012-02-14 16:33:27 EST"
```