

Näide 2-1. Uurime rööviku kasvukiirusi kahel taimel.

```

data kiirus;
  input taim $ kiirus;
  cards;
  a 23
  a 24
  a 23
  a 26
  a 27
  a 29
  b 34
  b 30
  b 29
  b 32
  b 34
  b 29
  ;
proc ttest;
  class taim;
  var kiirus;
run;

```

******* t-testi tulemused *******

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The TTEST Procedure

Statistics

Variable	taim	N	Lower CL Mean	Mean	Upper CL Mean	Lower CL Std Dev	Std Dev	Upper CL Std Dev	Std Err
kiirus	a	6	22.791	25.333	27.875	1.5119	2.4221	5.9405	0.9888
kiirus	b	6	28.88	31.333	33.787	1.4595	2.3381	5.7344	0.9545
kiirus	Diff (1-2)		-9.062	-6	-2.938	1.6633	2.3805	4.1776	1.3744

T-Tests

Variable	Method	Variances	DF	t Value	Pr > t
kiirus	Pooled	Equal	10	-4.37	0.0014
kiirus	Satterthwaite	Unequal	9.99	-4.37	0.0014

Equality of Variances

Variable	Method	Num DF	Den DF	F Value	Pr > F
kiirus	Folded F	5	5	1.07	0.9401

***** näide 2-2 *****

Uurime pääsukese saba pikendamise mõju lennukiirusele.

```
data paasu;
  input enne parast;
  vahe=parast-enne;
  cards;
  23 34
  26 27
  25 32
  27 29
  23 25
  24 26
  30 37
  40 45
  ;
proc means t prt;
  var vahe;
run;
```

***** tulemused *****

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The MEANS Procedure
Analysis Variable : vahe

t Value	Pr > t
3.73	0.0073

Näide 2-3. Võrdleme röövikute kasvukiirusi kolmel eri taimel.

```
data kiirus;
  input taim $ kiirus;
  cards;
  a 23
  a 24
  a 23
  a 26
  a 27
  a 29
  b 34
  b 30
  b 29
  b 32
  b 34
  b 29
  c 23
  c 19
  c 15
  c 20
  c 24
  c 25
  ;
proc anova;
  class taim;
  model kiirus=taim;
run;
proc nparlway wilcoxon;
  class taim;
  var kiirus;
run;
```

***** proc ANOVA tulemused *****

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The ANOVA Procedure

Class Level Information

Class	Levels	Values
taim	3	a b c

Number of observations 18

The ANOVA Procedure

Dependent Variable: kiirus

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	323.1111111	161.5555556	19.13	<.0001
Error	15	126.6666667	8.4444444		
Corrected Total	17	449.7777778			

R-Square Coeff Var Root MSE kiirus Mean
 0.718379 11.22463 2.905933 25.88889

Source	DF	Anova SS	Mean Square	F Value	Pr > F
taim	2	323.1111111	161.5555556	19.13	<.0001

***** Kruskal-Wallis testitulemused *

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable kiirus
 Classified by Variable taim

taim	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
a	6	51.50	57.0	10.621842	8.583333
b	6	92.00	57.0	10.621842	15.333333
c	6	27.50	57.0	10.621842	4.583333

Average scores were used for ties.

Kruskal-Wallis Test

Chi-Square 12.5594
 DF 2
 Pr > Chi-Square 0.0019