

# *Λατινικά Τετράγωνα*

## **Weeks**

<b>Infant</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1</b>	<b>0.40(2)</b>	<b>1.11(3)</b>	<b>1.16(4)</b>	<b>0.88(1)</b>
<b>2</b>	<b>0.20(3)</b>	<b>1.04(4)</b>	<b>0.57(1)</b>	<b>0.80(2)</b>
<b>3</b>	<b>1.14(1)</b>	<b>1.11(2)</b>	<b>1.32(3)</b>	<b>1.38(4)</b>
<b>4</b>	<b>1.08(4)</b>	<b>1.34(1)</b>	<b>1.73(2)</b>	<b>1.55(3)</b>

**Μελέτη σύγκρισης τεσσάρων τρόπων διατροφής  
σε νεογνά, για τέσσερις εβδομάδες**

```
> week_rep(1:4,rep(4,4))
> inf_rep(1:4,4)
> form_c("2","3","1","4","3","4","2","1","4",
+        "1","3","2","1","2","4","3")
> res_c(.4,.2,1.14,1.08,1.11,1.04,1.11,1.34,1.16,.57,
+        1.32,1.73,.88,.8,1.38,1.55)
> week_as.factor(week)
> inf_as.factor(inf)
> LS1.df_data.frame(res,week,inf,form)
```

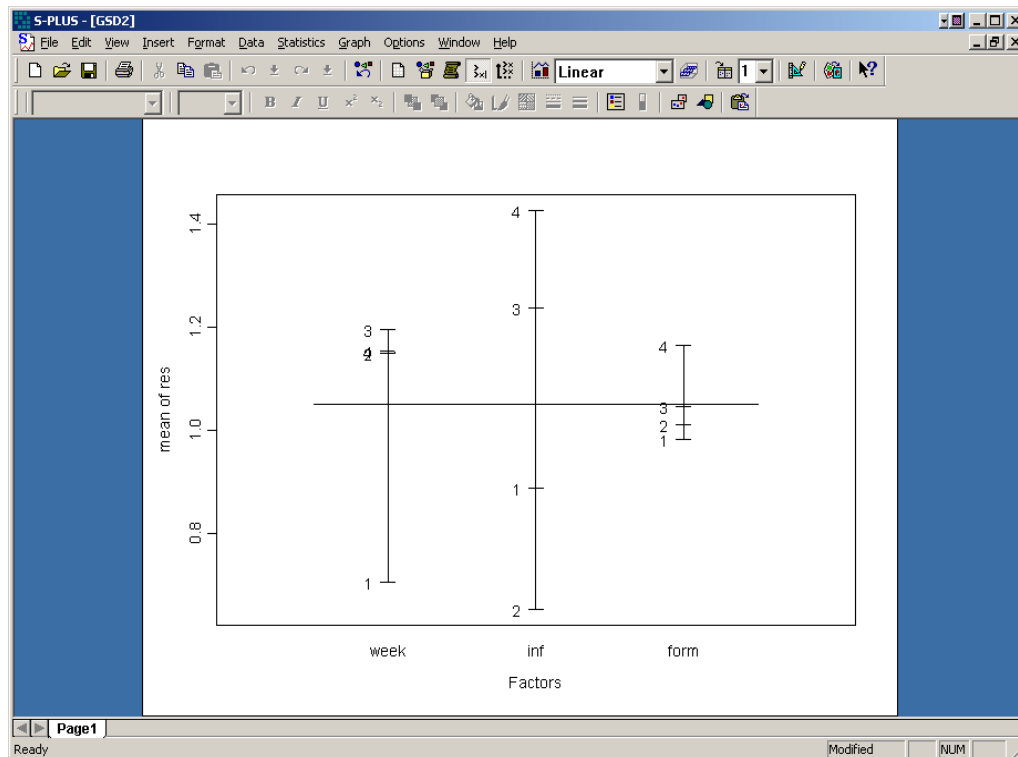
```
> tapply(LS1.df$res,list(LS1.df$form),mean)
```

```
> tapply(LS1.df$res,list(LS1.df$form),var)^.5
```

1	2	3	4	mean
0.982	1.01	1.045	1.165	

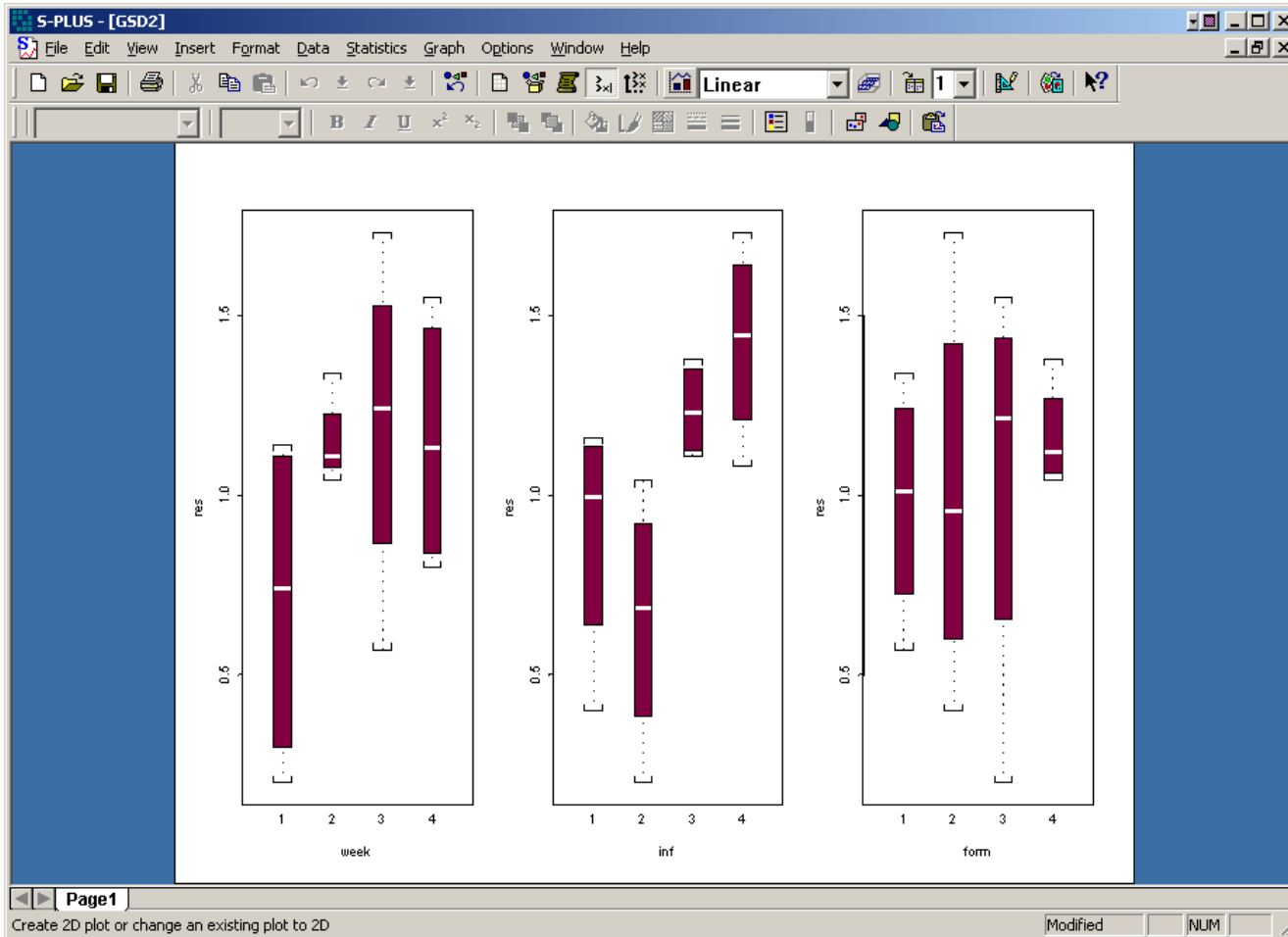
0.333	0.56	0.591	0.152	sd
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```
> plot.design(LS1.df)
```

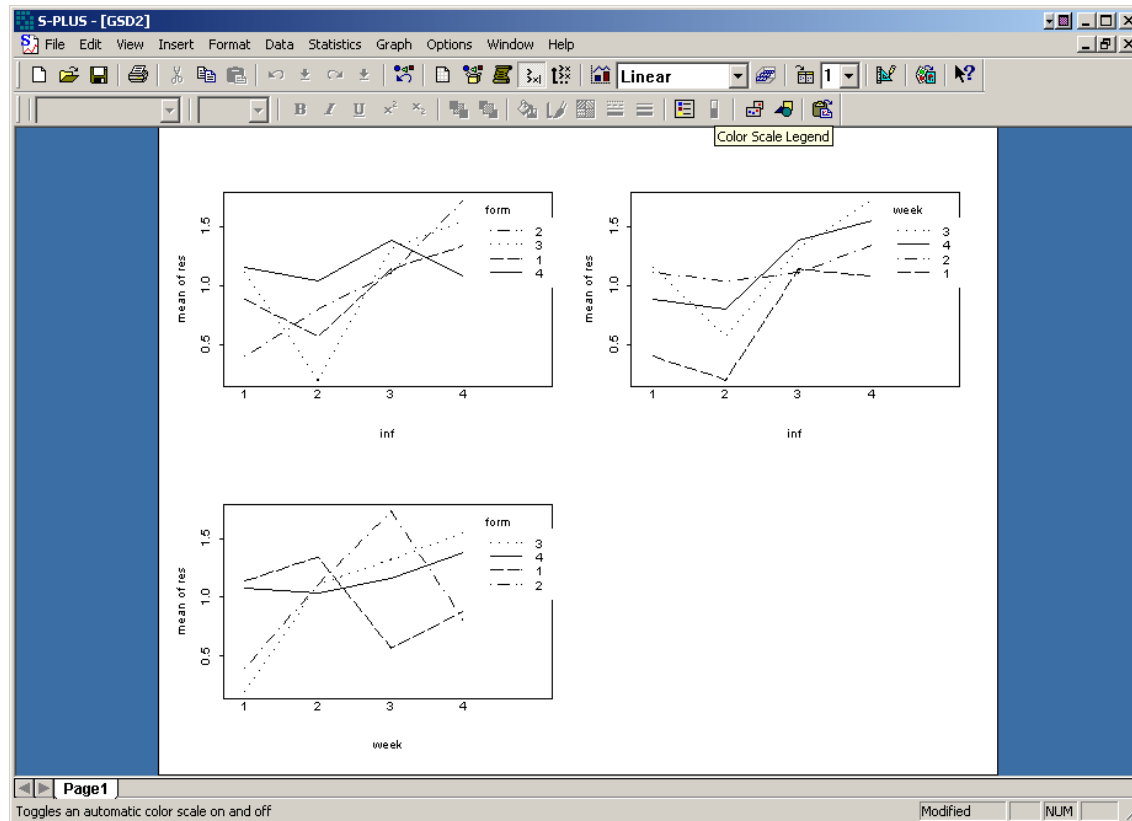


> `par(mfrow=c(1,3))`

> `plot.factor(LS1.df)`



- > **attach(LS1.df)**
- > **interaction.plot(week, form, res)**
- > **interaction.plot(inf, week, res)**
- > **interaction.plot(inf, form, res)**
- > **detach()**



```
> LS1.aov_aov(res~week+inf+form,LS1.df)
```

```
> summary(LS1.aov)
```

	Df	Sum of Sq	Mean Sq	F Value	Pr (F)
week	3	0.642219	0.2140729	4.105110	0.0667357
inf	3	1.440769	0.4802562	9.209500	0.0115611
form	3	0.077619	0.0258729	0.496145	0.6982155
Residuals	6	0.312887	0.0521479		

```
> RE_100*(SLS1[1,3]+SLS1[1,1]*SLS1[4,3])
```

```
+ /(SLS1[1,1]+1)/SLS1[4,3]
```

```
> RE
```

```
[1] 177.6277
```

# *Επαναλαμβανόμενα Λατινικά Τετράγωνα*

## **Square 1**

### **Weeks**

<b>Infant</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1</b>	<b>0.40(2)</b>	<b>1.11(3)</b>	<b>1.16(4)</b>	<b>0.88(1)</b>
<b>2</b>	<b>0.20(3)</b>	<b>1.04(4)</b>	<b>0.57(1)</b>	<b>0.80(2)</b>
<b>3</b>	<b>1.14(1)</b>	<b>1.11(2)</b>	<b>1.32(3)</b>	<b>1.38(4)</b>
<b>4</b>	<b>1.08(4)</b>	<b>1.34(1)</b>	<b>1.73(2)</b>	<b>1.55(3)</b>

## **Square 2**

### **Weeks**

<b>Infant</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1</b>	<b>1.55(2)</b>	<b>0.89(3)</b>	<b>0.16(4)</b>	<b>0.55(1)</b>
<b>2</b>	<b>0.11(3)</b>	<b>1.05(4)</b>	<b>0.68(1)</b>	<b>0.98(2)</b>
<b>3</b>	<b>0.22(1)</b>	<b>0.96(2)</b>	<b>1.45(3)</b>	<b>0.82(4)</b>
<b>4</b>	<b>0.53(4)</b>	<b>1.25(1)</b>	<b>0.61(2)</b>	<b>1.91(3)</b>

## **Square 3**

### **Weeks**

<b>Infant</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1</b>	<b>0.27(2)</b>	<b>1.16(3)</b>	<b>0.59(4)</b>	<b>0.45(1)</b>
<b>2</b>	<b>0.50(3)</b>	<b>0.70(4)</b>	<b>0.93(1)</b>	<b>0.96(2)</b>
<b>3</b>	<b>0.32(1)</b>	<b>1.63(2)</b>	<b>0.55(3)</b>	<b>0.79(4)</b>
<b>4</b>	<b>0.09(4)</b>	<b>0.30(1)</b>	<b>1.34(2)</b>	<b>1.09(3)</b>

## **Square 4**

### **Weeks**

<b>Infant</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1</b>	<b>0.73(2)</b>	<b>1.21(3)</b>	<b>1.21(4)</b>	<b>0.77(1)</b>
<b>2</b>	<b>0.64(3)</b>	<b>1.38(4)</b>	<b>0.82(1)</b>	<b>0.79(2)</b>
<b>3</b>	<b>-0.03(1)</b>	<b>1.04(2)</b>	<b>0.57(3)</b>	<b>0.55(4)</b>
<b>4</b>	<b>1.05(4)</b>	<b>1.11(1)</b>	<b>1.00(2)</b>	<b>0.50(3)</b>

```
> inf1_rep(1:4,16)
> week1_rep(rep(1:4,rep(4,4)),4)
> res1_c(LS1.df[1:16,1])
> res12_c(1.55,.11,.22,.53,.89,1.05,.96,1.25,.16,.68,1.45,.61,.55,
+ .98,.82,1.91)
> res13_c(.27,.5,.32,.09,1.16,.7,1.63,.3,.59,.93,.55,1.34,.45,.96,
+ .79,1.09)
> res14_c(.73,.64,
+ -.03,1.05,1.21,1.38,1.04,1.11,1.21,.82,.57,1,.77,.79,.55,.5)
> res11_res1
> res1_c(res11,res12,res13,res14)
> squar_rep(1:4,rep(16,4))
> inf1_as.factor(inf1)
> week1_as.factor(week1)
> squar_as.factor(squar)
> infsqu_c(rep(1:4,4),rep(5:8,4),rep(9:12,4),rep(13:16,4))
> infsqu_as.factor(infsqu)
> LS2.df_data.frame(res1,week1,inf1,form1,squar,infsqu)
```



```
> LS2.aov_aov(res1~infsqu+week1+form1,LS2.df)
```

```
> summary(LS2.aov)
```

	Df	Sum of Sq	Mean Sq	F Value	Pr (F)
infsqu	15	3.195644	0.2130429	1.632669	0.1057655
week1	3	2.425906	0.8086354	6.197034	0.0013903
form1	3	0.725069	0.2416896	1.852205	0.1524429
Residuals	42	5.480475	0.1304875		