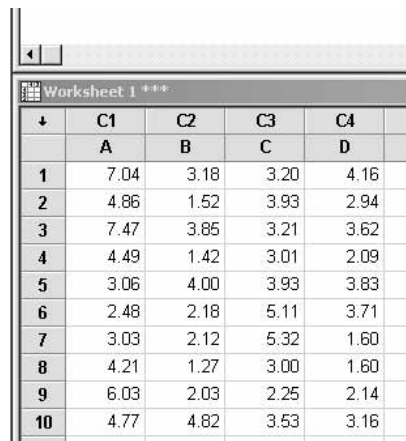


## 7.5. Parametric one-way ANOVA with equal numbers of replicates

**EXAMPLE 7.4.** The effectiveness of weaning plantlets of *Lobelia* 'Hannah' from tissue culture onto one of four composts

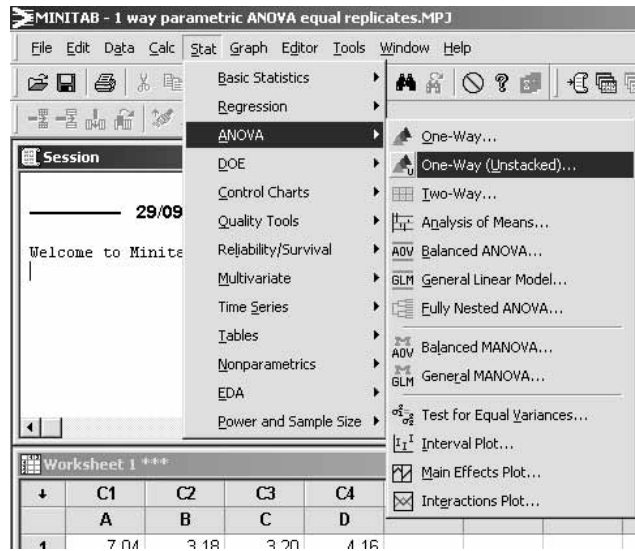
**BOX 7.6.** How to carry out a one-way parametric ANOVA with equal replicates

**Step 1.** Enter your data into the worksheet part of the Minitab display, using sensible column headings.

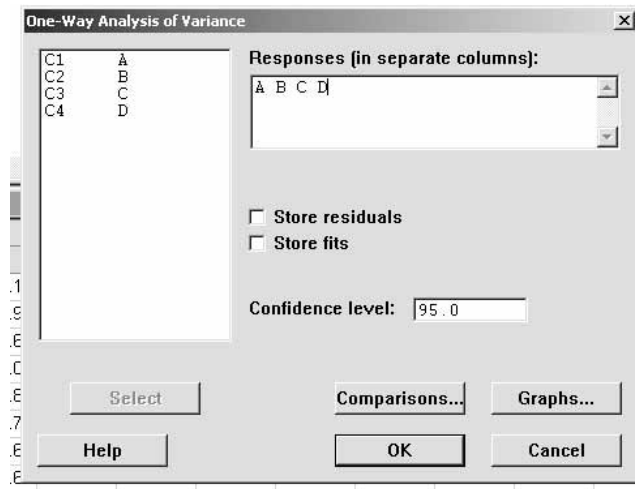


	C1	C2	C3	C4
	A	B	C	D
1	7.04	3.18	3.20	4.16
2	4.86	1.52	3.93	2.94
3	7.47	3.85	3.21	3.62
4	4.49	1.42	3.01	2.09
5	3.06	4.00	3.93	3.83
6	2.48	2.18	5.11	3.71
7	3.03	2.12	5.32	1.60
8	4.21	1.27	3.00	1.60
9	6.03	2.03	2.25	2.14
10	4.77	4.82	3.53	3.16

**Step 2.** Perform the analysis. Go to 'Stat', 'ANOVA', 'One-Way (Unstacked)'.



Transfer all four columns across to the 'Responses' window by first highlighting them (one at a time) and then clicking on 'Select'.

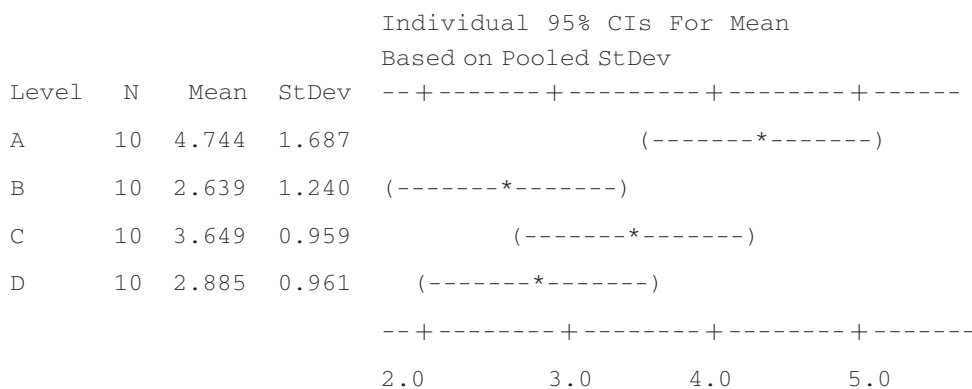


Click on 'OK'. The results of the analysis will appear in the 'Session' window.

**One-way ANOVA: A, B, C, D**

Source	DF	SS	MS	F	P
Factor	3	26.88	8.96	5.76	0.003
Error	36	56.04	1.56		
Total	39	82.91			

S=1.248 R-Sq=32.41% R-Sq(adj)=26.78%



Pooled StDev=1.248

**Step 3. Decide what the results mean.**

The value of  $F$  is 5.76, and  $p$  value is 0.003. This means that there is a difference, at better than  $p=0.01$ , between the weights of the plantlets weaned on the four different composts.