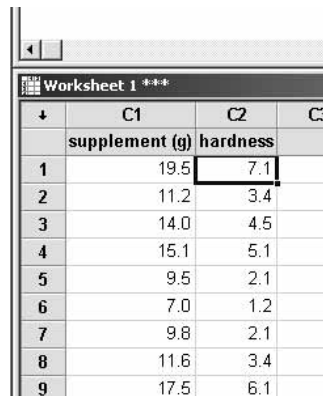


6.3. Pearson's product moment correlation

EXAMPLE 6.1. The hardness of egg shells in pullets

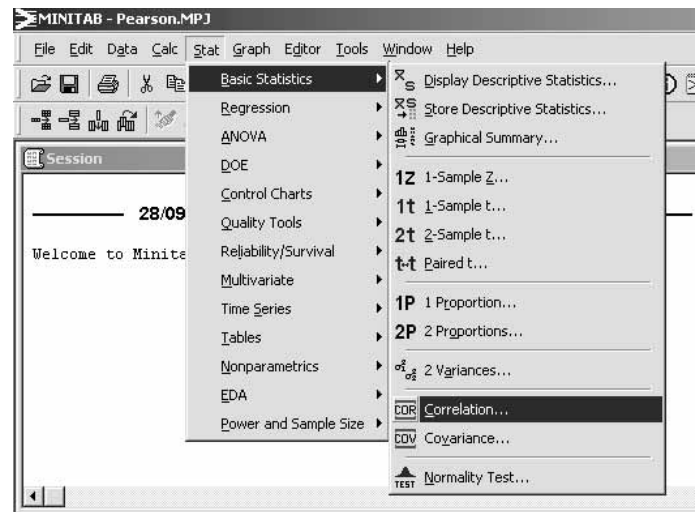
BOX 6.2. How to carry out a Pearson's product moment correlation

Step 1. Enter the data into the Worksheet part of the Minitab screen.

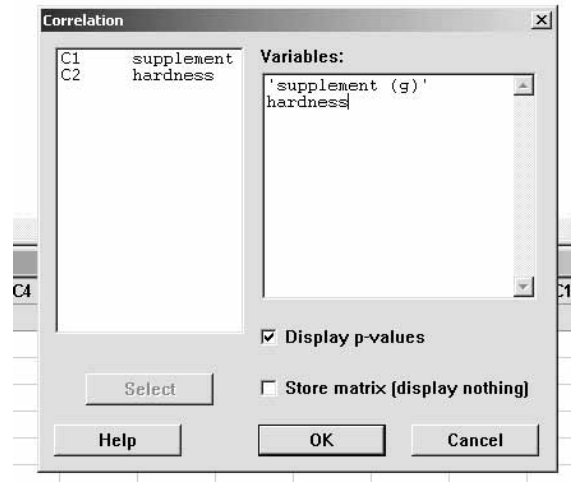


	C1	C2	C3
	supplement (g)	hardness	
1	19.5	7.1	
2	11.2	3.4	
3	14.0	4.5	
4	15.1	5.1	
5	9.5	2.1	
6	7.0	1.2	
7	9.8	2.1	
8	11.6	3.4	
9	17.5	6.1	

Step 2. Perform the test. Go to 'Stat', 'Basic Statistics', 'Correlation'.



Select each of the two variables in turn by clicking on them, and transfer them to the 'Variables' window by clicking on 'Select'.



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

Correlations: supplement (g), hardness

```
Pearson correlation of supplement (g) and hardness = 0.994  
P-Value = 0.000
```

Step 3. Decide what the results mean.

In this case, we find that the correlation coefficient between the amount of food supplement eaten and the hardness of the egg shells is 0.994, and the p value is so small that it doesn't show up in the third decimal place. This correlation is significant at $p = 0.001$ (and possibly at an even higher significance).