## DESEASONALISING THE DATA

deseasonalised figure = $\frac{actual\ \ figure}{seasonal\ \ index}$

### Example

The price of sugar (in $ per kilogram) has been recorded over 3 years on a seasonal basis.

| | Summer | Autumn | Winter | Spring |
|---|---|---|---|---|
| 1998 | 1.03 | 1.26 | 1.36 | 1.14 |
| 1999 | 0.98 | 1.25 | 1.34 | 1.07 |
| 2000 | 0.95 | 1.21 | 1.29 | 1.04 |

a. Calculate seasonal indices
b. De-seasonalise the data using the seasonal indices
c. Plot the original and deseasonalised data.
d. Comment on your results.

Average for 1998: 1.1975

Average for 1999: 1.16

Average for 2000: 1.1225

**Seasonal indices:**

| | Summer | Autumn | Winter | Spring |
|---|---|---|---|---|
| 1998 | 0.860125 | 1.05219 | 1.1357 | 0.95198 |
| 1999 | 0.8448 | 1.07759 | 1.15517 | 0.9224 |
| 2000 | 0.8463 | 1.07795 | 1.1492 | 0.9265 |

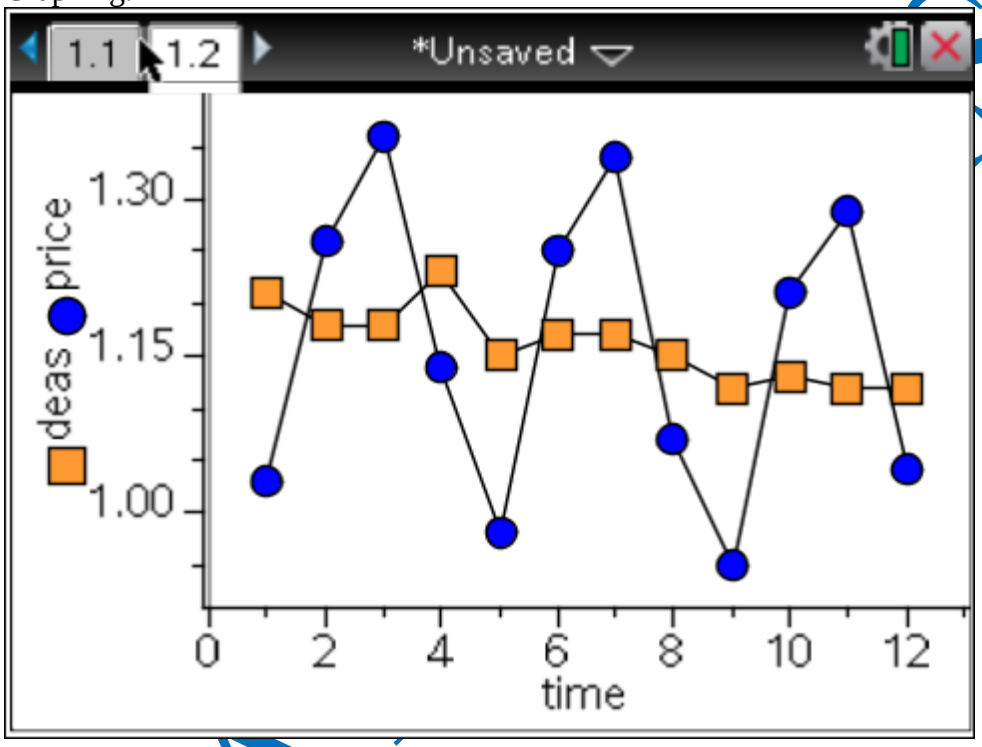
SI: 0.85 1.07 1.15 0.93

**Deseasonalised data:**

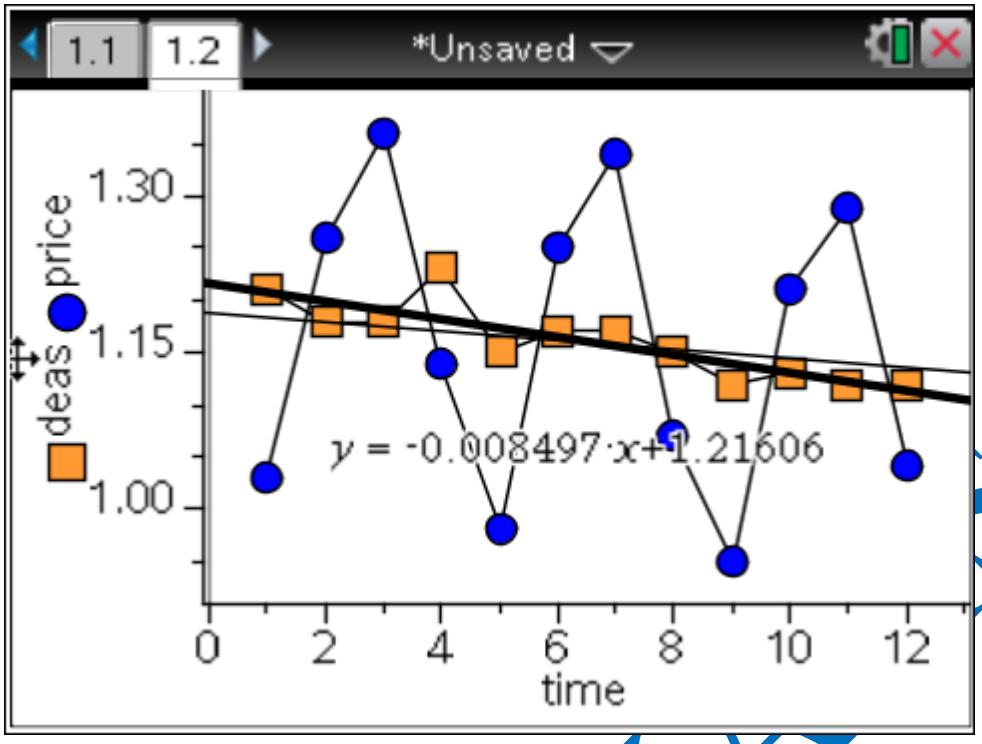
| | Summer | Autumn | Winter | Spring |
|---|---|---|---|---|
| 1998 | 1.21 | 1.18 | 1.18 | 1.23 |
| 1999 | 1.15 | 1.17 | 1.17 | 1.15 |
| 2000 | 1.12 | 1.13 | 1.12 | 1.12 |

| | A time | B price | C deas | D |
|---|---|---|---|---|
| = | | | | |
| 1 | 1 | 1.03 | 1.21 | |
| 2 | 2 | 1.26 | 1.18 | |
| 3 | 3 | 1.36 | 1.18 | |
| 4 | 4 | 1.14 | 1.23 | |
| 5 | 5 | 0.98 | 1.15 | |

Graphing:




Fitting the trend line to the deseasonalised data:




Price = -.008497 year +1.21606

There is a slight trend downwards.