Solutions

Business answers are marked by **level of response** against the assessment objectives: award **AO1** knowledge, **AO2** application, **AO3** analysis and **AO4** evaluation.

Each answer shows the steps, then the **result**.

2.1

- predicting future sales from past data and market knowledge (2 for a clear definition; 1 for a partial idea)

2.2

- $560 - 500 = +60$ units (2; award 1 for a correct method with the wrong figure)

2.3

- positive correlation: as one variable rises, the other rises too; negative correlation: as one rises, the other falls (2 for a clear difference; 1 for a partial idea)

3.1

- *[3]* **AO1** 1 — name a benefit (better planning of production, staff, stock or cash). **AO2** up to 2 — develop it, e.g. a good forecast lets the firm order the right amount of stock
- no shortage or waste
- lower costs (2 developed / 1 limited)

3.2

(a)

- forecast $= 800 + (-120) = 680$ units (2; award 1 for a correct method with the wrong figure)

(b)

- *[4]* AO1/AO2 1–2 + AO3 up to 2 — e.g. the forecast assumes past patterns continue
- a new competitor or changed tastes could break the trend
- the actual figure may differ a lot
- production based on it could be too high or too low

3.3

- *[12]* **AO1** 2 / **AO2** 2 / **AO3** 2 / **AO4** up to 6. **Useful:** smooths out noise to show the trend, reveals seasonality, and supports planning of output, stock and staff. **Limited:** it assumes past patterns continue (extrapolation), ignores sudden change, and the forecast is only as good as the data. Judgement: time-series analysis is a helpful planning guide, especially for a seasonal product, but it should be combined with market knowledge — its value depends on how stable the market is