4(a)	**Using the data in Table 1.2, calculate the monthly revenue from the sales of the classic pie after the price increase.**

		Mark
Correct new sales revenue $ sign not required	3500 × $3.60 = $12 600	**4**
New quantity of sales	5000 – 30% = 5000 – 1500 = 3500	**3**
% change in QD	20% × –1.5 = (–)30%	**2**
Percentage change in price OR PED equation	0.60/3.00 × 100 = (+) 20% Percentage change in Quantity demanded / Percentage change in price	**1**
No creditable response		**0**

4(b)	**Evaluate the usefulness to PPP of elasticity measures when deciding on the marketing mix for the new cheese pies in export markets.**

Level	AO1 Knowledge and understanding 2 marks	AO2 Application 2 marks	AO3 Analysis 2 marks	AO4 Evaluation 6 marks
3				**5–6 marks** **Developed evaluation in context** • A developed judgement/conclusion is made in the business context. • Developed evaluative comments which balance some key arguments in the business context.
2	**2 marks** **Developed knowledge** of relevant key term(s) and/or factor(s) is used to answer the question.	**2 marks** **Developed application** of relevant point(s) to the business context.	**2 marks** **Developed analysis** that identifies connections between causes, impacts and/or consequences.	**3–4 marks** **Developed evaluation** • A developed judgement/conclusion is made. • Developed evaluative comments which balance some key arguments.
1	**1 mark** **Limited knowledge** of relevant key term(s) and/or factor(s) is used to answer the question.	**1 mark** **Limited application** of relevant point(s) to the business context.	**1 mark** **Limited analysis** that identifies connections between causes, impacts and/or consequences.	**1–2 marks** **Limited evaluation** • A judgement/conclusion is made with limited supporting comment/evidence. • An attempt is made to balance the arguments.
0	**0 marks** No creditable response.	**0 marks** No creditable response.	**0 marks** No creditable response.	**0 marks** No creditable response.

4(b)	Responses may include: **AO1 Knowledge and understanding** *Limited knowledge* K *will be demonstrated through knowledge of the concept of elasticity of demand <u>or</u> knowledge or marketing strategy.* *Developed knowledge* K + K *will be demonstrated through knowledge of the concept of elasticity of demand <u>and</u> knowledge of marketing strategy.* **Knowledge of elasticity of demand** Understanding of different elasticity concepts: • promotional elasticity measures responsiveness of demand to changes in promotional spending • price elasticity measures responsiveness of demand to a change in price • cross price elasticity measures the responsiveness of demand to a change in price of another product • income elasticity measures the responsiveness of demand to a change in income. • Understanding of inelastic - not responsive and elastic - responsive to change in price / promotion / income. **Knowledge of marketing strategy** • Marketing strategy includes market research and marketing mix to achieve marketing objectives within a budget. • Marketing mix consists of price, place, promotion and product

4(b)	**AO2 Application** Do not reward APP for quoting elasticities, need to show understanding of the figures. *Limited application,* APP *applies knowledge to PPP once.* *Developed application,* APP + APP *applies knowledge to PPP twice.* • Estimated PED for classic pies is –1.5, which is price elastic, as confirmed by the calculation in 3a, the 20% increase in price would lead to a 30% decrease in demand. • Estimated PED for premium pies is –0.4, which is price inelastic. The 25% increase in price only led to a 10% decrease in demand • OFR for PED calculations • YED for classic pies is –1.2 (inferior good) and for premium pies +1.5 (normal/luxury good) • Monthly sales revenue following price increases would decrease (by \$2400) for classic pies but increase (by \$3000) for premium pies. • Market research data may suggest whether the demand for the proposed new cheese pie will be price elastic or price inelastic in other countries in the region. • As real incomes are falling in other countries in the region, cheese pies may be more successful if seen as a ‘budget’ product.

4(b)	**AO2 Analysis** *Limited analysis* AN *– candidate shows one link in the chain of analysis.* *Developed analysis* L2 AN *– candidate shows two or more links in the chain of analysis.* • Knowledge of PED is useful to PPP in making decisions about pricing. For example, elastic PED would indicate that an increase in price would decrease revenu AN and therefore probably decrease pro L2 AN . • Decreasing price, such as using a launch penetration price will increase quantity of cheese pies demanded and therefore increase revenue/encourage more customers to try the new produ AN overall leading to a successful launch and loyal customers increasing profi L2 AN . • As real incomes are falling, launching cheese pies as a ‘budget’ item should lead to higher sales due to negative YED. AN **AO3 Evaluation** *Limited evaluation* EVAL *– limited supported judgement and/or a weak attempt at evaluative comment.* *Developed evaluation* L2 EVAL *– supported judgement and/or reasonable evaluative comment.* *Developed evaluation in contex* L3 EVAL *– supported judgement in context and/or reasonable evaluative comment in context.* • In a marketing strategy, PPP will also consider other factors e.g. promotional elasticity of demand and local tastes in different countries in the region. • As this is a new pie product being launched, existing elasticity data for other products may not be as useful • To what extent may a pan global strategy be suitable in this case? • A judgement about the usefulness of elasticity to marketing mix decisions. • A judgement about the most important factors influencing marketing strategy decisions. • A judgement about the limitations of elasticity calculations. • Measurement of elasticity is difficult and likely to be inaccurate due to large range of factors that will affect outcomes, particularly competitor decisions. Other things don’t remain equal in markets. • Factors that the judgement could depend on including the degree of competitive rivalry in the market • Other elements of marketing strategy are important e.g. integrated marketing mix to ensure consistency in message communicated to potential customers and therefore attract sales. Accept all valid responses.

4(a)	**Using the data in Table 1.4, calculate the four period centred moving average for Quarter 1 2025.** **Responses may include:** 4 period moving average = 8 period moving total / 8 (1 mark if no relevant calculation) Calculation of one **or** two **relevant** 4 period totals (1) 7 + 5.5 + 4.2 + 6.4 = 23.1 **AND/OR** 5.5 + 4.2 + 6.4 + 7.6 = 23.7 Calculation of relevant 4 period totals **and relevant** 8 period total **OR** calculation of **relevant** 8 period total (2 marks) 8 period total = 23.1 + 23.7 = 46.8 (2) Centred quarterly moving average = 46.8 / 8 (3) = 5.85 **or** $5.85m (4) Other common answers: 23.1 / 4 = 5.775 **OR** 23.7 / 4 = 5.925 (2) Not using the correct sales volume figures. 4 consecutive quarterly sales volumes added together and divided by 4 = 1 mark e.g. (6 + 7 + 5.5 + 4.2) / 4 = 22.7 / 4 = 5.675 (1)

4(b) **Evaluate the usefulness of time series analysis to KTJ in making business decisions.**

Level	AO1 Knowledge and understanding 2 marks	AO2 Application 2 marks	AO3 Analysis 2 marks	AO4 Evaluation 6 marks
3				**5–6 marks** **Developed evaluation in context** • A developed judgement/conclusion is made in the business context. • Developed evaluative comments which balance some key arguments in the business context.
2	**2 marks Developed knowledge** of relevant key term(s) and/or factor(s) is used to answer the question.	**2 marks Developed application** of relevant point(s) to the business context.	**2 marks Developed analysis** that identifies connections between causes, impacts and/or consequences.	**3–4 marks** **Developed evaluation** • A developed judgement/conclusion is made. • Developed evaluative comments which balance some key arguments.
1	**1 mark** **Limited knowledge** of relevant key term(s) and/or factor(s) is used to answer the question.	**1 mark** **Limited application** of relevant point(s) to the business context.	**1 mark** **Limited analysis** that identifies connections between causes, impacts and/or consequences.	**1–2 marks** **Limited evaluation** • A judgement/conclusion is made with limited supporting comment/evidence. • An attempt is made to balance the arguments.
0	**0 marks** No creditable response.	**0 marks** No creditable response.	**0 marks** No creditable response.	**0 marks** No creditable response.

4(b)

Responses may include:
AO1 Knowledge and understanding
Limited knowledge K *will be demonstrated through knowledge of TSA.*
Developed knowledge K + K *will be demonstrated through knowledge of TSA and its usefulness.*

Examiner note: *Do not reward comments that TSA is time consuming or calculations are complex or that workers require training.*

- Sales forecasting involves making a prediction of future sales.
- Time series analysis is a method of forecasting based on extrapolation from past data. (maximum of 1 mark for definition of TSA / sales forecasting)
- Benefits include:
  – Contribution to workforce planning.
  – Planning purchase of resources.
  – Greater accuracy in cash flow forecasting.
  – Aids operational decisions such as need to increase capacity.
  – Aids decisions about pricing.
  – Improves forecasting accuracy
  – Identifies both trend and seasonal variation.
- Limitations
  – Based on historical data
  – Does not account for external changes

AO2 Application
Limited application, APP *applies knowledge to KTJ once. Developed application,* APP APP *applies knowledge to KTJ twice.*
Application is making use of relevant case information not just repeating it.

- Q3 is peak month for sales.
- Juice is not produced in the US but is imported.
- Helps plan fruit imports.
- The US market is very competitive.
- Fluctuations in country B's exchange rate.

A-Level Business: **w25 32**

4(b)	**AO3 Analysis** *Limited analysis* AN *– candidate shows one link in the chain of analysis.* *Developed analysis* L2 AN *– candidate shows two or more links in the chain of analysis.* • Helps ensure efficient use of labour and machinery helping to control costs of producti AN and therefore profit. • L2 AN • Contributes to creating cash flow forecast which will help ensure that KTJ has sufficient finance in place to deal with future needs. AN • Identifying the trend in sales growth will help set realistic marketing objectives in the marketing plan thus ensuring that resources are not waste AN **AO4 Evaluation** *Limited evaluation* EVAL *– limited supported judgement and/or a weak attempt at evaluative comment. Developed evaluation* L2 EVAL *– supported judgement and/or reasonable evaluative comment.* *Developed evaluation in context* L3 EVAL *– supported judgement in context and/or reasonable evaluative comment in context.* • Using 4 period moving average fits the data well as there are clear seasonal variations ensuring that the technique is more likely to give reliable results. • Unexpected changes in the external environment such as entry of a new competitor will result in the predictions being incorrect and therefore less useful in making the best decisions. • TSA relies on future events behaving as in the past so may not be reliable as markets are dynamic • May be advisable to introduce an element of probability to the forecasts – what if analysis • Usefulness depends on stability of seasonal trends over time • Forecasts may be less reliable if market conditions change unexpectedly • Most effective when combined with other forecasting methods • More suitable for short-term operational planning than for long-term strategic decisions • Practical value depends on KTJ's capacity to adjust production and procurement in response to forecasts Accept all valid responses.

A-Level Business: **s25 31**

4(a)(i)	**Using the data in Table 1.2, calculate the average seasonal variation for Quarter 4.** Average seasonal variation = Total seasonal variation for Quarter 4 2022–3 / 2. **OR** 1.02 + 0.32 = 1.34 (1) 1.34 / 2 = ($)0.67 (million) (2)
4(a)(ii)	**Jon has calculated the trend for 2025 Quarter 4 as $21.41 million.** **Using your answer to (a)(i), calculate forecast sales for 2025 Quarter 4.** Forecast revenue = forecast trend plus average seasonal variation for that quarter **OR** 21.41 + 0.67 (1) 21.41 + 0.67 = ($)22.08 (million) (2) **OFR based on 4(a)(i)**

4(b)	**Evaluate whether time series analysis is sufficient to allow WS to make decisions to achieve its marketing objective.**

Level	AO1 Knowledge and understanding 2 marks	AO2 Application 2 marks	AO3 Analysis 2 marks	AO4 Evaluation 6 marks
3				**5–6 marks** **Developed evaluation in context** • A developed judgement/conclusion is made in the business context. • Developed evaluative comments which balance some key arguments in the business context.
2	**2 marks** **Developed knowledge** of relevant key term(s) and/or factor(s) is used to answer the question.	**2 marks** **Developed application** of relevant point(s) to the business context.	**2 marks** **Developed analysis** that identifies connections between causes, impacts and/or consequences.	**3–4 marks** **Developed evaluation** • A developed judgement/conclusion is made. • Developed evaluative comments which balance some key arguments.
1	**1 mark** **Limited knowledge** of relevant key term(s) and/or factor(s) is used to answer the question.	**1 mark** **Limited application** of relevant point(s) to the business context.	**1 mark** **Limited analysis** that identifies connections between causes, impacts and/or consequences.	**1–2 marks** **Limited evaluation** • A judgement/conclusion is made with limited supporting comment/evidence. • An attempt is made to balance the arguments.
0	**0 marks** No creditable response.	**0 marks** No creditable response.	**0 marks** No creditable response.	**0 marks** No creditable response.

4(b)

Indicative content

AO1 Knowledge and understanding

Limited knowledge K *will be demonstrated through knowledge of time series analysis OR knowledge of other factors*
Developed knowledge K + K *will be demonstrated through knowledge of time series analysis and knowledge of how it contributes to decision making or knowledge of other factors influencing decision making*
L1 all skills if no clear K of what TSA is.
Understanding of Time Series Analysis including its advantages (quantitative, based on actual data, factors in seasonality) and disadvantages (circumstances may change making prediction inaccurate, false sense of accuracy, relies on accurate data)

- Knowledge of qualitative sales forecasting.
- Knowledge of marketing planning and its elements: objectives, resources, research, marketing mix.
- Role of market research and market analysis in setting marketing objectives and making decisions

AO2 Application

Limited application, APP *applies knowledge to WS once.*
Developed application, APP + APP *applies knowledge to WS twice.*

- WS three markets: fashion, leisure, work.
- Use of information in Table 1.3.
- WS products high price, value for money.
- Jon’s objective is to increase annual sales by 5% p.a.
- WS sells to major retailers and independents.
- Increasing demand for non-leather/sustainable shoes.
- Jon recommended preparing an environmental audit.

4(b)	**AO3 Analysis** *Limited analysis* AN *– candidate shows one link in the chain of analysis.* *Developed analysis* L2 AN *– candidate shows two or more links in the chain of analysis* • Sales forecasting enables minimum cost distribution. • Sales forecasting enables objective to be set and planned for. • Sales forecasting may ignore changes e.g. new product lines, new marketing mix and therefore be inaccurate. • Objective of increasing sales requires account to be taken of costs, not just sales. • Changing nature of markets requires accurate forecasting (qualitative and quantitative) for sales targets to be met. • TSA data in Table 1.2 is for all products. Table 1.3 indicates there are differences in each product/market making the data inaccurate for each. • Table 1.3 gives important information which marketing planning can use **AO4 Evaluation** • Considered judgement based on argument. • Sales forecasting important but other elements need to be considered for objectives to be met e.g. production capacity, appropriate quality of product, appropriate marketing mix. • Objective of increasing sales is imprecise. • Accuracy of forecasting relies on accurate methods and data generated. • Objective is confused – 'increase sale without entering new markets' but Jon wants research into non-leather products. Are these a 'new market'? or not? This needs clarifying before setting a marketing plan. • Any new products will significantly alter sales forecasts, and in a constantly changing market forecasts on their own may not be accurate. • Information on % sales revenue from different products, forecast market growth and strength of competition must be taken into account when forecasting sales, not just rely on TSA. • Forecasting sales must apply to the three different markets, not just overall sales. Accept all valid responses