Unit 4.3 Sales forecasting [HL Only]

Task 1: Vocabulary quiz

Identify the key terms from the clues given. *Hint*: the answers are in alphabetical order.

Key term	Definition
	The most common form of expressing an average, by calculating the sum of all numbers in the data set divided by the number of items in the data set.
	Mathematical method used to find underlying trends by smoothing out variations in a data set caused by seasonal, cyclical and random variations.
	These are unpredictable fluctuations in sales revenues, caused by erratic and irregular factors that cannot be practically anticipated.
	A quantitative management technique used to forecast a firm's level of sales over a given time period.
	These are predictable and periodic fluctuations in sales revenues over a specified time period, such as certain months or times of the year.
	A statistical technique that identifies trends in historical data, often adjusted for seasonal and cyclical fluctuations.

Task 2: True or false?

		True/False
a.	Sales forecasting is a statistical technique used to predict the level of sales over a certain time period.	
b.	Seasonal variation is a forecasting technique that identifies the trend by using past data and extending this trend to predict future sales.	
c.	Correlation shows the degree to which two sets of numbers or variables are related, e.g. sales revenue during different times of the year.	
d.	The range is the numerical difference between the highest and the lowest values in a data set.	
e.	The 4-point moving average is $123.0 for the following data set: $121, $123, $122 and $124.	
f.	External influences, such as an economic recession, can cause large discrepancies and inaccuracies in sales forecasts.	
g.	As a mathematical tool, the culture of an organization or the sub-culture of the sales department has no impact on sales forecasting.	
h.	Marketers can use sales forecasts to make decisions about expanding to overseas markets.	

Task 3: Multiple choice

1. Sales forecasting is a
   - **A.** Statistical tool used to predict a firm's sales level
   - **B.** Mathematical tool used to calculate sales data
   - **C.** Management tool used to extrapolate trends in certain variables
   - **D.** Qualitative management decision-making tool

2. Which of the following is not an example of time series data?
   - A. Seasonal variations
   - B. Cyclical variations
   - C. Random variations
   - D. Budgetary variations

3. Benefits of sales forecasting do not include the direct ability to
   - A. Better manage a firm's cash flows
   - B. Increase market share
   - C. Improve stock control
   - D. Improve productive efficiency

4. The number that occurs more frequently than any other value in the data set is called the
   - A. Range
   - B. Median
   - C. Modal
   - D. Mean

5. Time series data is not feasible during which stage of a product's life cycle?
   - A. Launch
   - B. Growth
   - C. Maturity
   - D. Decline

6. Which of the following products is least likely to face seasonal fluctuations in demand?
   - A. Umbrellas
   - B. School bus services
   - C. Banking services
   - D. IB examiners and moderators

7. Which of the following statements is not a limitation of sales forecasting?
   - A. Forecasts become less accurate the longer the time period under consideration
   - B. Forecasts are rarely perfect
   - C. They are more accurate for predicting sales of single items rather than for a group of items
   - D. The data make it difficult to extrapolate sales trends

8. If a firm's quarterly sales revenues are $1179, $1281 and $2202, then its three-part moving average is

   A. $1023

   B. $1230

   C. $1554

   D. $2100

9. Which of the following is not a form of qualitative forecasting?

   A. Consumer panels

   B. Consumer surveys

   C. Moving averages

   D. Focus group interviews

10. The fundamental difference between seasonal variations and cyclical variations is

   A. The duration of the repeating pattern of variations in sales revenues

   B. The magnitude of the variations in sales revenues

   C. The time of year that the variations in sales revenues occur

   D. The assumptions behind the variations in sales revenues