4.2 Market research and sales forecasting

Name: _____ Class: _____ Date: _____ **Total: 30 marks**

KEY WORDS primary research • secondary research • focus group • quota sampling • moving average • sampling error

Objective

Build the skills to answer exam questions on **market research** : primary and secondary research, sampling methods and descriptive statistics, and at HL **sales forecasting** with moving averages.

You must be able to:

- distinguish primary and secondary, qualitative and quantitative research
- evaluate surveys, interviews, focus groups and observation
- compare quota, random, stratified, cluster, snowball and convenience sampling, and explain sampling errors
- use descriptive statistics (mean, median, mode, charts) to present data
- explain ethical issues in market research
- calculate three-part moving averages and identify the trend, seasonal, cyclical and random variations

1 Key knowledge and worked examples

■ Market research

Primary research collects new data for a specific purpose: **surveys/questionnaires**, **interviews**, **focus groups** (a small group discusses a product), **observation**. It is specific and up to date but costly and slow. **Secondary research** uses data already collected by others: market analyses, academic journals, government publications, media articles. It is cheap and quick but may be out of date or not quite relevant.

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Quantitative data are numbers (e.g. 62% would buy); **qualitative** data are opinions, reasons and feelings.

sampling method	how it works	strength / weakness
random	everyone has an equal chance of selection	unbiased / needs a full list
quota	a set number from each group (e.g. 20 men under 30)	quick, reflects groups / not random
stratified	random sample from each group in proportion to the population	representative / needs detailed data
cluster	choose one or a few areas and survey there	cheap / areas may not be typical
snowball	each person suggests others	reaches hard-to-find groups / biased
convenience	ask whoever is easy to reach	quick and cheap / often biased

Sampling errors happen when the sample does not represent the population (too small, biased). **Ethics:** informed consent, honesty about purpose, privacy and data protection, no pressure on vulnerable groups.

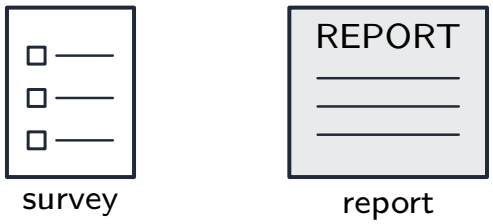
Descriptive statistics (toolkit): the **mean** (total ÷ number of values), **median** (middle value in order), **mode** (most common value); bar charts, pie charts and infographics to present results.

AHL – sales forecasting: a **moving average** smooths data to show the **trend**. A three-part moving average is the mean of each set of three consecutive values. Actual sales also show **seasonal variation** (regular changes within a year), **cyclical variation** (over several years, with the business cycle) and **random variation** (one-off events). Forecasts help planning but rely on past patterns continuing.

Answer shapes: name the method → why it suits the case → one limitation → judgement.

2 Practice

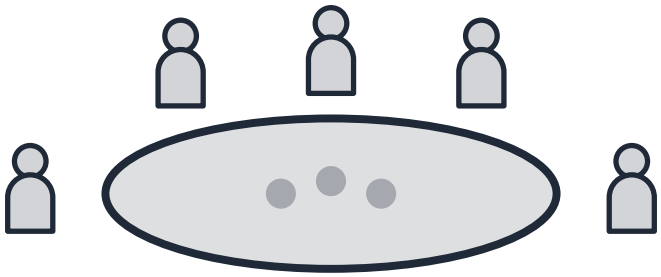
2.1 Distinguish between primary and secondary market research. [2]



2.2 Distinguish between qualitative and quantitative research. [2]



2.3 Explain **one** advantage and **one** disadvantage of using a focus group to test a new snack. [4]



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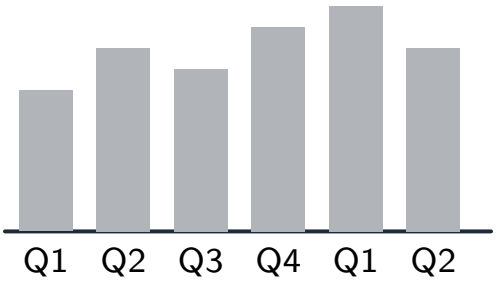
2.4 Distinguish between quota sampling and random sampling, and explain **one** advantage of each. [4]

group	quota
students	20
workers	20



names drawn at random

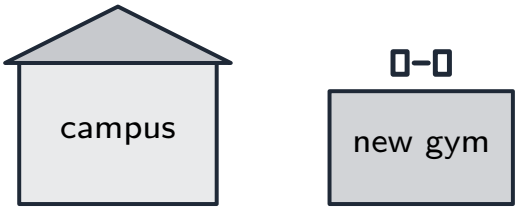
2.5 A shop's quarterly sales ($000) are 20, 26, 23, 29, 32, 26. Calculate the four three-part moving averages and describe the trend. [4]



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3 Exam-style questions

3.1 FitZone runs 8 gyms and plans to open a new one near a university campus. It needs to know how many students and local workers would join, and what they would pay.



(a) Explain **two** sources of secondary research FitZone could use. [4]

(b) Discuss the most suitable primary research and sampling methods for FitZone. [10]

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Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

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

2.1

primary research: collecting new data first-hand for a specific purpose, e.g. a survey; secondary research: using data already collected by others, e.g. government statistics

2.2

quantitative: numerical data that can be measured and analysed statistically; qualitative: opinions, attitudes and reasons, often from interviews or focus groups

2.3

advantage: detailed opinions and reasons, e.g. why people like the taste, which help improve the snack; disadvantage: small group may not represent the market / one strong member may influence others / costly to run

2.4

quota: a set number of people from each group is chosen by the researcher; advantage: quick and cheap, and makes sure each group is represented; random: every member of the population has an equal chance of being chosen; advantage: less bias, so results are more representative

2.5

$(20+26+23)\div 3 = \mathbf{23}$; $(26+23+29)\div 3 = \mathbf{26}$; $(23+29+32)\div 3 = \mathbf{28}$; $(29+32+26)\div 3 = \mathbf{29}$; the trend is rising

3.1

(a) any two, explained: government or local population data on the number and age of people near the campus; market analyses of the fitness industry, e.g. average membership prices; data on competitors' gyms from their websites or media articles; the university's published student numbers

(b) award up to [10]: survey/questionnaire: reaches many people, gives quantitative data on willingness to join and price; but poorly written questions or low response rates reduce accuracy; focus group: detailed reasons, e.g. opening hours, classes students want; but small and costly; sampling: quota sampling of students and workers ensures both groups are included; random or stratified sampling would be more representative but needs a full list; convenience sampling on campus is cheap but biased; ethics: consent and data protection; judgement: e.g. a survey with quota sampling plus one focus group