Practice Paper 3

NOTE: This is the third full-length practice paper. The first is in Appendix E of the print book; the second is in this companion at `practice_paper_2.md` (different scenarios, same structure). This paper mirrors the official 2026–2027 AP Business with Personal Finance exam format: 60 MCQs in 70 minutes (60% of score), one Business Canvas Validation FRQ in 25 minutes (15%), and three Part B FRQs in 65 minutes (25%). Take this exam under timed conditions for realistic prep. Calculator policy: handheld 4-function OR Bluebook's Desmos 4-function calculator only.

ALL SCENARIOS, NAMES, AND BUSINESSES BELOW ARE FICTIONAL. ORIGINAL SYNAPSE ACADEMIC PRESS CONTENT.

Section I: Multiple Choice

60 Questions | 70 Minutes | 60% of Exam Score

Directions: Each question is followed by four answer choices. Many appear in stimulus-based sets of 3 or 4 sharing a common chart, table, scenario, or financial statement. Select the best answer. No penalty for incorrect answers.

Questions 1–4 refer to the following scenario.

Rosalia is co-owner of Ferrocraft, a small metal-fabrication shop that produces custom parts for local contractors. She and her partner Jonah each invested $35,000 when they started the business five years ago. They have no written partnership agreement. The business had revenue of $290,000 last year and owes $47,000 to a materials supplier. A contractor recently filed a lawsuit alleging that a faulty bracket caused property damage.

1. Based on the information given, Ferrocraft is most likely organized as which type of business?

A. General partnership
B. Limited liability partnership
C. C corporation
D. Sole proprietorship

2. Because Ferrocraft has no written partnership agreement, which of the following best describes the default legal risk each partner faces?

A. Each partner's liability is capped at the amount originally invested.
B. Rosalia is liable for the supplier debt, and Jonah is liable for the lawsuit, based on area of responsibility.
C. Each partner is personally liable for all business debts and legal judgments, including those created by the other partner.
D. Neither partner faces personal liability because the business has been operating for more than five years.

3. If Rosalia and Jonah convert Ferrocraft to an LLC, the primary change in their legal exposure would be

A. profits would no longer be taxed at the individual level
B. the business would be required to file a corporate income-tax return
C. they would be required to issue publicly traded shares to raise capital
D. each partner's personal assets would be better protected from business creditors and lawsuits

4. Which of the following would be the most significant ongoing disadvantage of Ferrocraft becoming a C corporation rather than an LLC?

A. C corporations cannot have more than two owners.
B. C corporations are exempt from federal income tax.
C. C corporations cannot enter into legal contracts.
D. Corporate profits may be taxed twice — once at the corporate level and again when dividends are paid to shareholders.

Questions 5–7 refer to the following PESTEL table.

Tomás is the director of strategy at Veloria Transit, a regional bus company operating in three mid-sized cities. He has summarized recent external developments for the board.

Factor	Recent Development
1	The state legislature passed a $200 million grant program to subsidize zero-emission bus fleets.
2	Fuel prices rose 18% year-over-year, driven by global supply constraints.
3	Remote work has reduced weekday commuter ridership by 22% compared to pre-pandemic levels.
4	A new mobile app allows real-time bus tracking and contactless fare payment.

Factor	Recent Development
5	An environmental advocacy group is mounting a campaign to discourage diesel vehicle use in urban centers.

5. Development 1 is best classified as which PESTEL factor?

A. Political/Legal
B. Social
C. Economic
D. Technological

6. Which two developments most directly and *specifically* push Veloria toward zero-emission vehicles (as opposed to simply raising operating costs)?

A. Developments 1 and 5
B. Developments 2 and 3
C. Developments 1 and 2
D. Developments 3 and 4

7. Development 3 — reduced weekday commuter ridership — most directly affects which aspect of Veloria's business model?

A. The company's supplier relationships
B. Revenue, because lower ridership reduces fare income from the largest commuter segment
C. The company's ability to hire qualified bus drivers
D. The company's eligibility for the state grant in Development 1

Questions 8–10 refer to the following entrepreneurship scenario.

Ezra recently lost his job as a restaurant cook and is considering launching a ghost-kitchen meal-prep service called Prep & Prosper. Before committing to an industrial kitchen lease ($3,800/month), he plans to run a six-week pilot using a licensed shared kitchen ($400/month). During the pilot he will sell 50-portion weekly meal packs to 15 early-access subscribers at $75 each.

8. Ezra's six-week pilot is best described as which type of entrepreneurial activity?

A. A minimum viable product test designed to gather real-world market evidence before scaling
B. A franchise arrangement
C. A horizontal integration strategy
D. An initial public offering

9. If Ezra sells all 50 portions per week for six weeks at $75 each, what is his total pilot-period revenue?

A. $3,750
B. $15,000
C. $45,000
D. $22,500

10. After the pilot, Ezra discovers that 11 of his 15 subscribers want to continue and would recommend Prep & Prosper to a friend. Which of the following conclusions is best supported by this evidence?

A. Ezra has proven the business is financially viable and should immediately sign the industrial lease.
B. The pilot provides early desirability evidence — strong repeat intent and referral willingness — but financial viability still requires cost analysis at scale.
C. Because fewer than all 15 subscribers want to continue, the concept has failed.
D. Ezra should abandon the ghost-kitchen model and open a full-service restaurant instead.

Questions 11–14 refer to the following vision, mission, and goals table.

Mira is the founder of Verdant Interiors, a sustainable home-goods company. She has written the following statements and goals.

Item	Statement
Vision	"A world where every home is furnished without harming the planet."
Mission	"We design and sell sustainable home goods that let customers live beautifully while reducing their environmental footprint."
Goal A	"Achieve $1.2 million in net revenue by December 31 of next year."
Goal B	"Expand into two new metropolitan markets within the next 24 months."
Goal C	"Improve customer satisfaction scores to at least 4.5 out of 5 by the end of Q2."

11. Which of the following best describes the difference between Verdant's vision and its mission?

A. The vision is about what Mira personally hopes to earn; the mission is about environmental compliance.
B. The vision describes a desired long-term future state; the mission describes what the company does and for whom it does it, right now.
C. The vision is legally required to start a business; the mission is optional.
D. The vision focuses on financial targets; the mission focuses on marketing.

12. Which of Goals A, B, and C is the BEST example of a SMART goal, and why?

A. Goal C — because customer satisfaction is more important than revenue.
B. Goal B — because expanding into new markets is always the highest-priority goal.
C. Goal A — because it states a specific dollar amount and a specific deadline.
D. Goal B — because "24 months" is longer and therefore more achievable.

13. A stakeholder is anyone affected by or who can affect a business. Which of the following is NOT typically considered a primary stakeholder in Verdant Interiors?

A. Mira, the founder and owner
B. Customers who purchase home goods
C. Suppliers who provide sustainable materials
D. A foreign government that has no trade relationship with the company

14. Suppose Verdant Interiors achieved $960,000 in net revenue against a goal of $1,200,000. What percentage of the revenue goal did the company achieve? (Round to the nearest whole percent.)

A. 72%
B. 88%
C. 80%
D. 96%

Questions 15–17 refer to the following customer data table.

Naomi manages marketing at Solstice Outdoor Gear, an e-commerce retailer. She has segmented the customer base into four groups.

Segment	Avg. Annual Spend	Repeat Purchase Rate	Email Click-Through Rate	Share of Active Customers
Weekend Hikers	$210	44%	12%	31%
Peak Season Buyers	$88	19%	6%	28%
Hardcore Enthusiasts	$540	78%	31%	18%
Occasional Gift Buyers	$65	11%	4%	23%

15. Based on the table, which segment has both the highest repeat purchase rate and the highest average annual spend?

A. Hardcore Enthusiasts
B. Peak Season Buyers
C. Weekend Hikers
D. Occasional Gift Buyers

16. Naomi is deciding where to invest a $20,000 retention budget. Which segment offers the strongest combination of engagement and average spend, making it the most efficient target?

A. Weekend Hikers — they are the largest share of the customer base.
B. Peak Season Buyers — they have a moderate repeat rate.
C. Hardcore Enthusiasts — highest spend ($540) and highest engagement signals.
D. Occasional Gift Buyers — they have the most room for growth.

17. Solstice's leadership proposes acquiring customers similar to the Hardcore Enthusiasts segment. Which research method would most directly support identifying where to find them?

A. A review of the company's accounts-payable ledger
B. A lookalike audience analysis using the Hardcore Enthusiast customer profiles
C. An internal audit of warehouse inventory levels
D. A price-sensitivity survey of Peak Season Buyers

Questions 18–20 refer to the following consumer behavior scenario.

Beatriz is the head of growth at Oaken Brewery, a craft beer company. She is studying how customers make purchase decisions and is applying Cialdini's principles of influence in a new advertising campaign.

18. Oaken Brewery releases a limited batch of 500 cases of a special-edition barrel-aged stout and includes the phrase "Only 500 cases — once it's gone, it's gone" in every ad. This tactic most directly applies which principle of influence?

A. Scarcity
B. Authority
C. Reciprocity
D. Liking

19. Oaken's website features a banner reading: "Voted Best Regional Craft Beer by the National Brewers Guild — two years running." This most directly uses which principle?

A. Consensus (social proof)
B. Commitment and consistency
C. Scarcity
D. Authority

20. Beatriz's team is testing an email that says: "You told us last year you'd try our seasonal flights — they're available now." This message attempts to leverage which principle of influence?

A. Reciprocity
B. Liking
C. Scarcity
D. Commitment and consistency

Questions 21–23 refer to the following market research scenario.

Kenji is the product manager at Pinnacle Fitness, a company considering launching a premium at-home rowing machine at $1,495. He commissioned a survey of 800 respondents who own home fitness equipment.

Survey Question	Response	% of Respondents
"Do you currently own or plan to buy a rowing machine?"	Yes	29%
"Do you currently own or plan to buy a rowing machine?"	No	71%
Among "Yes" respondents: "Would you pay $1,495 for a premium rower?"	Yes	52%
Among "No" respondents: "Would you consider rowing if an elite coach guided your workouts remotely?"	Yes	38%

21. Approximately how many of the 800 surveyed respondents own or plan to buy a rowing machine AND said they would pay $1,495?

A. 120
B. 57
C. 175
D. 232

22. The finding that 38% of non-rower respondents would consider rowing with guided coaching most directly suggests which opportunity for Pinnacle Fitness?

A. A coaching-integrated offering might unlock demand beyond the existing rowing enthusiast segment.
B. Lower the price to $995 because most respondents are unwilling to pay $1,495.
C. Abandon the product because 71% of respondents do not currently plan to buy a rower.
D. Focus exclusively on the 29% who already plan to buy a rowing machine.

23. Kenji wants to go deeper than the survey to understand why respondents who said "No" feel that way. Which research method would best help him?

A. A second quantitative survey with the same respondents
B. Focus-group sessions with non-rower respondents to explore their barriers and perceptions
C. A review of Pinnacle's accounts-receivable aging report
D. An analysis of competitor annual reports

Questions 24–26 refer to the following pricing scenario.

Indira operates Loom & Thread, a direct-to-consumer hand-woven textile company. Each throw costs $38 in material and labor. She currently sells 900 throws per month at $89 each. She is evaluating two alternative pricing strategies.

Option	Strategy	New Price	Expected Monthly Volume
A	Premium repositioning	$119	580
B	Penetration discount	$72	1,350

24. What is Loom & Thread's current monthly contribution margin at the existing price of $89?

A. $34,200
B. $57,600
C. $45,900
D. $80,100

25. Which option — A, B, or the current price — produces the highest monthly contribution margin?

A. Current price ($89 × 900)
B. Option A ($119 × 580)
C. Option B ($72 × 1,350)
D. Options A and B produce the same margin.

26. The primary nonfinancial risk of Option B (the penetration discount) for a hand-woven artisan brand is

A. the lower price will legally prevent Indira from raising prices in the future
B. the higher volume would require less total labor, reducing artisan employment
C. penetration pricing always reduces repeat purchase rates
D. a significantly lower price could damage brand perception and signal lower quality to customers who associate the craft with a premium price

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Questions 27–29 refer to the following income statement.

The following income statement is for the fiscal year ended March 31 for Ridgecrest Precision, a specialty machining company.

Line Item	Amount
Revenue	$875,000
Cost of Goods Sold	$420,000
Gross Profit	?

Line Item	Amount
Selling & Administrative Expenses	$198,000
Operating Income	?
Interest Expense	$22,000
Income Tax Expense	$42,000
Net Income	?

27. What is Ridgecrest Precision's gross profit for the year?

A. $257,000
B. $455,000
C. $420,000
D. $875,000

28. What is Ridgecrest Precision's net income for the year?

A. $173,000
B. $149,000
C. $193,000
D. $257,000

29. Ridgecrest Precision's gross margin (gross profit divided by revenue) is closest to

A. 28%
B. 40%
C. 52%
D. 48%

Questions 30–32 refer to the following balance sheet excerpt.

Selected balance sheet data for Waverly Bakehouse, a mid-sized bakery chain, as of June 30:

Item	Amount
Cash and Cash Equivalents	$52,000
Accounts Receivable	$31,000
Inventory	$64,000
Property and Equipment (net)	$340,000
Accounts Payable	$48,000

Item	Amount
Short-term Note Payable	$35,000
Long-term Debt	$195,000

30. What are Waverly Bakehouse’s total assets?

A. $147,000
B. $278,000
C. $487,000
D. $522,000

31. What is Waverly Bakehouse’s owner’s equity?

A. $487,000
B. $244,000
C. $278,000
D. $209,000

32. Waverly Bakehouse’s current ratio (current assets / current liabilities) is closest to

A. 0.75
B. 4.50
C. 2.25
D. 1.75

Questions 33–35 refer to the following personal-finance budgeting scenario.

Reza is 29 years old and works as a civil engineer earning $5,600 per month in take-home pay. He uses the 50/30/20 budget framework.

Category	Monthly Amount
Rent + utilities	$1,820
Groceries	$390
Transportation	$480
Dining out + recreation	$740
Streaming + subscriptions	$95
Gym membership	$55
Auto loan payment	$310
Student loan payment	$275

Category	Monthly Amount
Roth IRA contribution	$200
Emergency fund deposit	$180

33. Under the 50/30/20 framework, how much of Reza's take-home pay should go toward needs each month?

A. $2,800
B. $1,680
C. $2,240
D. $1,120

34. Using the budget table above, classify each expense and calculate Reza's total monthly spending on wants. (Rent + utilities, groceries, and transportation are needs; dining out + recreation, streaming, and gym are wants; auto loan, student loan, Roth IRA, and emergency fund are savings/debt service.)

A. $550
B. $740
C. $890
D. $835

35. Compared to the 50/30/20 framework target for wants (30% of take-home), Reza's actual want spending is

A. above the target — he is spending more than 30%
B. exactly at the target
C. below the target — he is spending less than 30%
D. impossible to evaluate without knowing his gross salary

Questions 36–38 refer to the following credit and debt scenario.

Ariella is 31 years old with a $6,800 credit card balance at 21.99% APR and a $22,000 car loan at 6.9% APR. She has $900 per month of discretionary cash flow after all fixed expenses and minimum payments.

36. Approximately how much interest does Ariella accrue on the credit card balance in one month?

A. $50
B. $150
C. $125
D. $99

37. Ariella's financial advisor recommends the debt-avalanche method. Under this method, Ariella should

A. pay minimums on all debts and use extra cash for investing
B. pay off the smallest balance first to gain psychological wins
C. consolidate all debt into a single payment regardless of interest rate
D. direct the extra $900 toward the credit card first because it carries the highest APR

38. Ariella is offered a personal loan at 11.9% APR to consolidate her credit card debt. Which of the following is the most accurate statement about this option?

A. It would always increase Ariella's total interest paid.
B. Personal loans are only available for mortgage purposes.
C. It could reduce her interest rate on the credit card balance from 21.99% to 11.9%, lowering total interest if she does not take on new credit card debt.
D. Consolidating debt eliminates the principal balance.

Questions 39–41 refer to the following cost-volume-profit scenario.

Kestrel Kettles manufactures a single model of electric kettle. Its fixed costs are $120,000 per year. Each kettle sells for $40 and has variable costs of $25.

39. What is the contribution margin per kettle?

A. $40
B. $25
C. $15
D. $65

40. How many kettles must Kestrel sell per year to break even?

A. 4,800
B. 8,000
C. 3,000
D. 12,000

41. If Kestrel wants to earn a target annual operating profit of $30,000, how many kettles must it sell?

A. 8,000
B. 9,000
C. 2,000
D. 10,000

Questions 42–44 refer to the following investing and savings scenario.

Sasha, age 27, has just started her first job with a $62,000 annual salary. Her employer offers a 401(k) with a 100% match on the first 3% of gross pay. She is also considering opening a Roth IRA.

42. Sasha contributes 3% of her $62,000 gross salary to the 401(k) to capture the full employer match. What is the total annual amount going into her 401(k) — her contribution plus the employer match?

A. $1,860
B. $2,790
C. $3,720
D. $4,650

43. Sasha's employer matches 100% of the first 3% of pay she contributes to the 401(k). Which of the following best explains why capturing the full employer match should be a top saving priority for Sasha?

A. The match is effectively an immediate, guaranteed 100% return on the dollars she contributes — a benefit no ordinary low-risk investment matches — so contributing less than 3% leaves guaranteed money on the table.
B. The employer match is taxed at a higher rate than her salary, so it reduces her take-home pay.
C. The employer match is available only to employees over age 50.
D. Employer matching contributions must be repaid to the company when she retires.

44. Sasha is debating whether to invest in a diversified index fund or to put all her Roth IRA money in shares of one company she admires. The primary reason a diversified index fund reduces risk compared to a single-stock investment is

A. diversification reduces unsystematic risk by spreading investment across many securities, so a decline in one company does not devastate the overall portfolio
B. index funds are guaranteed by the federal government
C. a single stock always outperforms an index fund over the long run
D. index funds have no management fees

Questions 45–47 refer to the following credit and savings scenario.

Jonah, age 26, reviews his finances before applying for an apartment lease that requires a credit check. His credit score is 704. His credit report shows a 100% on-time payment history, a $3,100 balance on a credit card with a $5,000 limit (62% utilization), a four-year average account age, and no recent hard inquiries. He also keeps $6,000 in a checking account earning 0.01% APY and is considering moving $5,000 of it into a high-yield savings account earning 4.4% APY.

45. Which item in Jonah's credit report is most likely holding his credit score down?

A. His 100% on-time payment history
B. His 62% credit utilization
C. His absence of recent hard inquiries
D. The fact that he checks his own credit report

46. Which action would most directly raise Jonah's credit score over the next several months?

A. Paying the card balance down so his utilization falls well below 30%, while continuing to pay on time
B. Closing the credit card so the balance no longer appears on his report
C. Applying for several new credit cards in the same month to increase his total credit limit
D. Keeping the 62% utilization but switching the card to a higher rewards tier

47. Approximately how much more interest would Jonah earn in one year by moving $5,000 into the high-yield savings account instead of leaving it in checking?

A. $22
B. $4.40
C. $220
D. $2,200

Questions 48–50 refer to the following organizational structure scenario.

Pallavi is the new CEO of a 320-person professional services firm, Meridian Consulting Group, that advises clients in the healthcare and financial sectors. The firm currently uses a strict functional structure (separate departments for consulting, marketing, finance, HR, and technology). Meridian is losing clients who complain that it takes too long to assemble project teams and that communication across departments is slow.

48. Which structural change would most directly address the client complaint about slow team assembly and cross-department communication?

A. Reorganizing into client-sector teams (healthcare team, financial-sector team) that include consultants, marketers, and technologists together
B. Reducing employee salaries to cut costs
C. Adding more layers of management to improve oversight
D. Outsourcing the marketing department entirely

49. A potential disadvantage of Meridian moving from a functional to a divisional (client-sector) structure is

A. employees will lose all functional expertise
B. clients will no longer be able to reach their assigned team
C. functions may be duplicated across divisions, raising costs
D. revenue will immediately decline

50. Pallavi is also considering a matrix structure. Under a matrix structure, a consultant at Meridian would

A. report to no one and work independently
B. report to both a functional manager (e.g., head of consulting) and a sector team leader simultaneously
C. work exclusively in one city and never interact with other offices
D. be required to rotate departments every six months by law

Questions 51–53 refer to the following business ethics scenario.

A junior buyer at Crestfield Retail discovered that a vendor is offering her a $500 personal gift card each time she places a large order with that vendor — a practice the vendor calls "a loyalty bonus." Crestfield's written code of conduct prohibits employees from accepting gifts valued above $25 from vendors.

51. The vendor's "loyalty bonus" is best described as

A. an ethical violation — it creates a conflict of interest that could cause the buyer to favor this vendor over better-value alternatives, harming Crestfield and its customers
B. a standard industry practice that is always permissible
C. a marketing expense that reduces the vendor's tax obligation only
D. an appropriate reward for strong business performance

52. Which stakeholder is most directly harmed if the buyer accepts the gift and continues favoring this vendor?

A. Only the buyer, because she assumes personal risk
B. No one is harmed if the buyer's decisions happen to be correct
C. Competing vendors — because they do not get a chance to give gifts
D. Crestfield — because the company may overpay for goods or miss better suppliers, affecting financial performance

53. The buyer's most ethical course of action is to

A. accept the gift card discreetly and place orders based on merit going forward
B. continue the arrangement and donate the gift cards to charity to neutralize any ethical concern
C. match the vendor's offer by asking all other vendors to provide gift cards as well
D. report the offer to her manager or ethics/compliance team and decline the gift

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Questions 54–57 refer to the following strategy scenario.

Theo is CEO of Driftwood Apparel, a regional surf-lifestyle clothing brand with 9 retail locations along the Gulf Coast. He is conducting a SWOT analysis and applying Porter's Five Forces to assess a potential expansion into the Southeast interior market.

Driftwood Apparel SWOT	
Strengths	Strong brand recognition in coastal markets; loyal repeat customer base; proprietary fabric technology
Weaknesses	Weak brand awareness outside coastal regions; high retail lease costs; limited e-commerce capability
Opportunities	Growing interest in outdoor/lifestyle apparel in inland cities; direct-to-consumer digital channel underdeveloped
Threats	National lifestyle brands (Patagonia, Columbia) entering Gulf Coast; rising cotton prices

54. Which element of Porter's Five Forces is most directly represented by the threat "national lifestyle brands entering the Gulf Coast"?

A. Bargaining power of buyers
B. Threat of new entrants
C. Threat of substitutes
D. Bargaining power of suppliers

55. Which strategy best leverages a Driftwood strength to address its most significant weakness?

A. Immediately close all retail stores to reduce lease costs
B. Use the proprietary fabric technology and coastal brand story as differentiators when launching a direct-to-consumer e-commerce channel targeting inland cities
C. Lower all prices to compete on cost with national brands
D. Cancel the expansion plan and focus only on existing locations

56. Rising cotton prices represent which category in the SWOT and which Porter's force simultaneously?

A. Opportunity; bargaining power of buyers
B. Threat; bargaining power of suppliers
C. Weakness; threat of new entrants
D. Strength; threat of substitutes

57. A competitor analysis reveals that two national brands, Patagonia and Columbia, already sell lifestyle apparel in the Southeast interior markets Theo wants to enter. This finding would most appropriately be classified as raising which concern?

A. High supplier bargaining power
B. Intense competitive rivalry within the target market
C. High buyer bargaining power
D. A technology threat

Questions 58–60 refer to the following management and KPI scenario.

The table below shows year-over-year KPI data for Ironvine Roasting Co., a specialty coffee roaster that sells wholesale to cafés and retail direct to consumers.

KPI	Year 1	Year 2
Total Revenue	$2,100,000	$2,450,000
Gross Profit Margin	42%	38%
Net Income	$188,000	$147,000
Employee Turnover Rate	14%	26%
Customer Retention Rate	81%	73%

KPI	Year 1	Year 2
On-Time Delivery Rate	94%	87%

58. Which statement is best supported by comparing Year 1 and Year 2 data?

A. Revenue, gross margin, and net income all improved in Year 2.
B. Customer retention improved while employee turnover fell in Year 2.
C. Revenue grew but gross profit margin, net income, customer retention, and on-time delivery all declined.
D. Gross profit margin and net income both improved in Year 2 despite lower revenue.

59. The combination of rising employee turnover (from 14% to 26%) and declining on-time delivery (from 94% to 87%) most likely suggests

A. Ironvine should immediately raise prices to offset costs
B. staffing instability may be affecting operational performance — a hypothesis Ironvine's leadership should investigate
C. both metrics are well within acceptable industry standards and need no action
D. the decline in on-time delivery is caused by supplier disruptions, not staffing

60. Ironvine's gross profit margin declined from 42% to 38% while revenue grew. Which of the following is the most plausible explanation, consistent with the other data?

A. Ironvine raised prices, which reduced demand
B. The company eliminated its wholesale channel, reducing volume
C. Gross profit margin and revenue always move in opposite directions
D. Cost of goods sold (green coffee beans, packaging, or production costs) rose faster than revenue, compressing the margin

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Section I: Answer Key and Explanations

1. (A) Two owners who each invested capital and operate together without a formal registered structure default to a general partnership under most state laws. There is no indication of an LLC, corporation, or limited liability structure.

2. (C) In a general partnership without a written agreement, both partners face unlimited personal liability for all business debts and legal judgments — including those created by the other partner. (A) is wrong because limited liability requires a formal LLC or LP structure.

3. (D) Converting to an LLC provides limited liability protection — personal assets are shielded from most business creditors — while typically retaining pass-through taxation by default. (A) is wrong; LLC members still pay tax on their share of profits on personal returns.

4. (D) C corporations face potential double taxation: corporate earnings are taxed at the corporate level, and when after-tax profits are distributed as dividends, shareholders pay tax again. This is the most significant structural disadvantage compared to an LLC.

5. (A) A state legislature passing a grant program is a Political/Legal development — government action creating a financial incentive for fleet transition.

6. (A) Development 1 (state grant for zero-emission buses) and Development 5 (advocacy campaign against diesel) together create both a financial incentive and a reputational pressure for transitioning to a zero-emission fleet.

7. (B) Commuter ridership is a primary revenue source for a transit company; a 22% decline directly reduces fare revenue from the largest segment. (A) and (C) are not directly implied by the ridership data.

8. (A) Using a low-cost shared kitchen for six weeks to test demand before committing to a $3,800/month lease is a minimum viable product test — the central tool of lean entrepreneurship.

9. (D) 50 portions × $75 × 6 weeks = $22,500.

10. (B) 11 of 15 continuing (73% retention) and willingness to refer are early desirability signals — positive evidence that customers value the service. However, financial viability at full scale (industrial kitchen costs, volume requirements) still requires separate analysis before signing a long-term lease. (A) overstates what the pilot proves.

11. (B) The vision describes a desired future world state ("a world where…"), while the mission describes what the company does and for whom in the present. (A) and (D) mischaracterize the purposes of vision and mission statements.

12. (C) Goal A is the best SMART example: it specifies a dollar target (specific, measurable), names a deadline of December 31 (time-bound), and implies achievability and relevance for a growing company. Goals B and C are reasonable but less fully specified. (B) and (A) justify choices based on subject matter, not SMART criteria.

13. (D) A foreign government with no trade relationship with the company does not affect or get affected by Verdant's operations in a meaningful way and would not typically be considered a primary stakeholder.

14. (C) $960,000 / $1,200,000 = 0.80, or 80%.

15. (A) Hardcore Enthusiasts have the highest average annual spend ($540) and the highest repeat purchase rate (78%) — they outperform every other segment on both dimensions simultaneously.

16. (C) Hardcore Enthusiasts combine the highest spend ($540), the highest repeat rate (78%), and the highest email click-through rate (31%). A retention budget directed at this segment generates the most revenue per dollar spent. (A) is tempting but the Weekend Hiker segment's engagement metrics are weaker.

17. (B) A lookalike audience analysis uses the behavioral and demographic profile of high-value existing customers (Hardcore Enthusiasts) to identify similar prospects — the standard method for expansion in customer acquisition.

18. (A) "Only 500 cases — once it's gone, it's gone" signals limited availability, which is the definition of the scarcity principle.

19. (D) A credible third-party award ("Voted Best Regional Craft Beer by the National Brewers Guild") signals expertise and legitimacy — the authority principle.

20. (D) Reminding customers of a prior commitment ("you told us last year you'd try…") uses the commitment and consistency principle — people feel internal pressure to act consistently with stated intentions.

21. (A) 29% of 800 = 232 people who own or plan to buy a rower. 52% of those 232 say they would pay $1,495: 0.52 × 232 ≈ 121 — closest to 120. (Rounding: 0.29 × 800 = 232; 232 × 0.52 = 120.6.)

22. (A) If 38% of non-rowers would consider rowing with guided coaching, there is an opportunity to expand the addressable market beyond existing rowing enthusiasts — supporting a coaching-integrated product concept.

23. (B) Focus groups provide qualitative depth — they reveal the "why" behind stated behaviors (barriers, perceptions, unmet needs) that a quantitative survey cannot uncover. (A) repeats the same method and would likely yield similar surface-level data.

24. (C) Contribution margin = ($89 – $38) × 900 = $51 × 900 = $45,900.

25. (B) Option A: ($119 – $38) × 580 = $81 × 580 = $46,980. Current price: $45,900 (from Q24). Option B: ($72 – $38) × 1,350 = $34 × 1,350 = $45,900. Option A produces the highest monthly contribution margin at $46,980.

26. (D) For an artisan brand like Loom & Thread, a deep price cut risks signaling lower quality and undermining the premium positioning that hand-woven textiles depend on. (A) is incorrect — prices are not legally frozen. (C) is not always true; high-volume penetration pricing can sustain repeat purchases through convenience. (B) is incorrect because higher volume actually requires more labor from artisans.

27. (B) Gross profit = $875,000 – $420,000 = $455,000.

28. (C) Net income = operating income – interest – taxes. Operating income = $455,000 – $198,000 = $257,000; net income = $257,000 – $22,000 (interest) – $42,000 (taxes) = $193,000. (D) $257,000 is operating income, before interest and taxes are subtracted. (A) and (B) omit or misapply one of the two deductions.

29. (C) Gross margin = $455,000 / $875,000 = 0.52, or 52%.

30. (C) Total assets = $52,000 + $31,000 + $64,000 + $340,000 = $487,000.

31. (D) Total liabilities = $48,000 + $35,000 + $195,000 = $278,000. Owner's equity = $487,000 – $278,000 = $209,000.

32. (D) Current assets = $52,000 + $31,000 + $64,000 = $147,000. Current liabilities = $48,000 + $35,000 = $83,000. Current ratio = $147,000 / $83,000 ≈ 1.77, closest to 1.75.

33. (A) 50% of $5,600 = $2,800 directed to needs.

34. (C) Wants = dining out + recreation ($740) + streaming + subscriptions ($95) + gym ($55) = $890.

35. (C) Target for wants = 30% of $5,600 = $1,680. Reza's actual wants = $890. $890 / $5,600 ≈ 15.9%, which is well below the 30% target.

36. (C) One month of interest = balance × monthly periodic rate = $6,800 × (21.99% ÷ 12) = $6,800 × 1.833% ≈ $125. (D) $99 and (A) $50 understate the monthly rate; (B) $150 overstates it.

37. (D) The debt-avalanche method directs extra cash toward the highest-interest-rate debt first — in this case, the credit card at 21.99% APR — to minimize total interest paid. (B) describes the debt-snowball method.

38. (C) A personal loan at 11.9% APR is lower than the credit card's 21.99% APR, so consolidating the credit card balance would reduce the interest rate and total interest paid — if Ariella does not accumulate new credit card debt afterward. (A) is wrong because the lower rate would reduce interest paid. (B) is incorrect — personal loans are not limited to mortgages.

39. (C) Contribution margin = selling price – variable cost = \$40 – \$25 = \$15 per kettle. (A) is the selling price, (B) the variable cost, and (D) their sum — none is the margin.

40. (B) Break-even units = fixed costs / contribution margin = \$120,000 / \$15 = 8,000 kettles. (A) wrongly divides by variable cost, (C) by the selling price, and (D) uses an incorrect \$10 margin.

41. (D) Units for target profit = (fixed costs + target profit) / contribution margin = (\$120,000 + \$30,000) / \$15 = 10,000 kettles. (A) is only the break-even quantity; (B) uses \$135,000 in the numerator; (C) counts only the profit (\$30,000 / \$15).

42. (C) Sasha's annual contribution = 3% × \$62,000 = \$1,860. Employer match = \$1,860. Total annual 401(k) contributions = \$1,860 + \$1,860 = \$3,720.

43. (A) A 100% match on the first 3% of pay is an immediate, guaranteed 100% return on those dollars — no ordinary low-risk investment comes close — so contributing less than 3% forfeits guaranteed money. (B), (C), and (D) describe rules that do not exist: the match is not taxed away, is not age-restricted here, and is never "repaid."

44. (A) Diversification across many securities reduces unsystematic risk (company- or sector-specific risk) because losses in one holding are offset by others. (B) is false — index funds are not federally guaranteed. (C) is empirically false. (D) is wrong — index funds have fees, though typically low ones.

45. (B) Amounts owed — especially credit utilization — is one of the heaviest-weighted credit-score factors, and 62% is far above the commonly recommended ceiling of roughly 30%. (A) and (C) help, not hurt, his score. (D) is irrelevant: checking your own report is a soft inquiry and never affects the score.

46. (A) Cutting utilization well below 30% while preserving his perfect payment history attacks the one weak factor in his file. (B) can backfire — closing the card removes its \$5,000 limit, which can push utilization on remaining accounts higher and eventually shorten credit history. (C) adds hard inquiries and lowers average account age. (D) leaves the score-damaging utilization untouched.

47. (C) High-yield interest: \$5,000 × 0.044 = \$220 per year. Checking interest: \$5,000 × 0.0001 = \$0.50. The difference is about \$219.50 — approximately \$220. (A) and (B) misplace the decimal; (D) overstates the gain by a factor of ten.

48. (A) Reorganizing into client-sector teams that combine consulting, marketing, and technology under one team structure would directly reduce cross-department handoffs and speed team assembly — addressing the client complaint.

49. (C) A divisional structure often duplicates functional capabilities (each division may have its own marketer, technologist, etc.), which raises total headcount and operating costs compared to a centralized functional model.

50. (B) In a matrix structure, each employee has two reporting lines — one to a functional manager (head of the consulting discipline) and one to a sector or project team leader. This is the defining feature of matrix organization.

51. (A) Accepting cash gifts from vendors to place orders creates a direct conflict of interest — the buyer may favor this vendor even when a competitor offers better value. Crestfield's code of conduct sets the \$25 threshold precisely to prevent this.

52. (D) The most direct harm falls on Crestfield — the company may overpay for merchandise, miss better-value suppliers, and suffer reduced competitiveness. Investors, employees, and customers are secondary stakeholders affected by weaker financial performance.

53. (D) Reporting the offer to a manager or the ethics/compliance team and declining the gift is the action most consistent with professional ethics codes and most protective of the buyer's own integrity. (A) and (C) perpetuate or escalate the conflict. (B) does not neutralize the conflict of interest created by accepting the gift.

54. (B) A new national brand entering a market where an existing business competes is the textbook definition of "threat of new entrants" in Porter's Five Forces.

55. (B) Using a proprietary fabric technology (strength) and Driftwood's coastal brand story to launch a direct-to-consumer digital channel (addressing the e-commerce weakness) in inland cities (opportunity) is a classic SO/WO hybrid strategy that directly connects strength to opportunity while addressing a weakness.

56. (B) Rising input prices are an external threat (SWOT), and they arise from suppliers having leverage over input costs — the bargaining power of suppliers force in Porter's Five Forces.

57. (B) Two established national brands already operating in the target market represents intense competitive rivalry within the market — the rivalry-among-existing-competitors force in Porter's Five Forces.

58. (C) Revenue rose from \$2.1M to \$2.45M, but gross profit margin fell from 42% to 38%, net income fell from \$188,000 to \$147,000, customer retention fell from 81% to 73%, and on-time delivery fell from 94% to 87%. Revenue growth is masking deteriorating quality and efficiency metrics.

59. (B) Rising employee turnover from 14% to 26% — nearly double — is a significant operational signal. It is plausible that losing experienced staff is degrading delivery performance. Leadership should investigate whether staffing instability and on-time delivery decline are causally linked before assuming other explanations.

60. (D) Gross profit margin compression (42% → 38%) while revenue grows typically indicates that costs of goods sold are rising faster than revenue — likely green coffee bean prices, packaging, or production costs. (A) would typically reduce volume, not compress margin with growing revenue. (C) is not a real principle. (B) is contradicted by the revenue growth.

Section II Part A: Free Response — Business Canvas Project Exam-Day Validation

1 Question | 25 Minutes | 15% of Exam Score

Throughout the course, you completed a Business Canvas Project in which you developed a product or service idea, identified a target customer, articulated a value proposition, and tested at least one hypothesis with real evidence. Use **your own** Business Canvas Project to answer the following sub-parts. Write in complete sentences. Cite specific details from your own project — do not substitute a generic example.

(a) In 2–3 sentences, pitch the product or service idea from your Business Canvas Project. State clearly what it is, who it is for, and what makes it different from what already exists.

(b) Identify the specific target customer for your product or service. Describe the problem your offering solves — and explain why that problem was worth solving based on evidence from your project (interviews, observations, or data).

(c) Describe **one** hypothesis you tested during the project. Write it as a testable "if/then" claim or equivalent. Explain the method you used to test it (interview series, survey, landing page experiment, prototype test, etc.) and summarize the specific evidence you collected.

(d) Explain how the evidence from part (c) either confirmed your original decision, led you to change your decision, or generated a new hypothesis you needed to test next. Describe specifically what changed in your thinking and why the evidence drove that outcome.

(e) Identify **one** viability challenge your business idea faces — for example, a unit economics problem, a high customer acquisition cost, a regulatory cost, or a structural dependency on one supplier or partner. Explain why this is a viability concern rather than a desirability or feasibility concern.

(f) Connect your project to all three lenses of innovation: desirability (do customers want it?), feasibility (can you build and deliver it?), and viability (can the business sustain itself financially?). Identify which lens has the **strongest evidence** in your project and which has the **weakest evidence**. Then propose one specific next step that would generate evidence to close the weaker lens.

Scoring Guideline — FRQ 1 (Total: 10 points)

Because each student's Business Canvas Project is unique, this rubric awards points for evidence quality and reasoning, not for matching a single correct answer. Each row is worth 0 or 1 point (10 rows = 10 points).

Sub-part	1 point — earns	0 points — does not earn	Brief example (earns / does not earn)
(a)	Names a specific product/service AND a feature distinguishing it from a generic version.	Generic category only, or no distinguishing feature.	Earns: "a reusable insulated lunch bag with a built-in freezer panel." Does not: "a food product."
(b)	Names or describes a specific target customer (not "everyone") AND a specific problem.	"Everyone," or no specific problem.	Earns: "commuting nurses who need meals cold through a 12-hour shift." Does not: "anyone who eats lunch."
(c)	States the hypothesis as a testable claim (if/then or equivalent).	No testable claim, or an untestable goal.	Earns: "If we price at $X, at least 9 of 12 interviewees pre-order." Does not: "People will like it."
(c)	Names the test method AND describes the type and result of the evidence.	Method or evidence missing.	Earns: "12 interviews; 9 said they'd pay at least $X." Does not: "We asked around."

Sub-part	1 point — earns	0 points — does not earn	Brief example (earns / does not earn)
(d)	Explicitly states whether the evidence confirmed, changed, or replaced the decision.	Outcome only implied, not stated.	Earns: “The evidence changed our price.” Does not: “We learned a lot.”
(d)	Explains why the evidence drove that outcome, referencing the data.	Reasoning is intuition, not data.	Earns: “Only 3 of 12 would pay full price, so we cut it.” Does not: “It felt right.”
(e)	Names a specific viability challenge (cost, margin, CAC, revenue model).	Generic (e.g., “it will be expensive”).	Earns: “$9 CAC exceeds our $6 gross margin per unit.” Does not: “It costs money.”
(e)	Correctly classifies the challenge as viability, not desirability or feasibility.	Miscategorizes the issue.	Earns: “This is viability — the unit economics don’t work yet.” Does not: labels a demand question as viability.
(f)	Names the strongest and weakest lens with reasoning grounded in project data.	Abstract definitions, no project evidence.	Earns: “Desirability strongest (9/12 pre-orders); viability weakest (negative margin).”
(f)	Proposes a specific next step that would generate evidence for the weakest lens.	Vague (e.g., “do more research”).	Earns: “Negotiate a bulk input price to test whether margin turns positive.” Does not: “research more.”

Section II Part B: Free Response

3 Questions | 65 Minutes | 25% of Exam Score Combined

FRQ 2 — Personal Finance

Daniela is 41 years old and works as a licensed physical therapist in Phoenix. Her annual gross salary is $96,000. Her monthly gross pay is $8,000. After federal income tax withholding, state income tax (Arizona), Social Security and Medicare payroll taxes, a $310/month employer-sponsored health insurance premium, and a 6% 401(k) contribution, her monthly take-home pay is $4,980.

Her employer matches 100% of the first 5% of gross pay she contributes to the 401(k). Daniela has been contributing 6%, fully capturing the match on the first 5% and contributing one additional percent on her own.

Daniela's monthly expenses are as follows:

Category	Type	Monthly Amount
Mortgage (principal + interest + escrow)	Fixed need	$1,740
HOA fee	Fixed need	$180
Utilities (electric, water, gas)	Variable need	$210
Groceries	Variable need	$480
Transportation (car payment + insurance + gas)	Mixed need	$620
Dining out + entertainment	Variable want	$550
Clothing + personal care	Variable want	$180
Streaming + gym + subscriptions	Variable want	$95
Emergency fund deposit	Savings	$150
529 education savings (daughter, age 9)	Savings	$200
Auto loan extra payment	Debt service	$100
Credit card payment (minimum)	Debt service	$65

Daniela has the following debts, savings, and goals:

- **Mortgage balance:** $218,000 at 6.25% fixed APR (29 years remaining).
- **Auto loan balance:** $9,400 at 5.1% APR, 24 months remaining at $415/month standard payment (she pays $515/month due to the $100 extra).
- **Credit card balance:** $4,800 at 19.99% APR (current minimum is $65).
- **Emergency fund balance:** $6,200 in a high-yield savings account (HYSA) at 4.5% APY.
- **401(k) balance:** $87,500.
- **529 balance:** $14,300.
- **Goal #1:** Bring emergency fund to 6 months of essential needs expenses within 30 months.
- **Goal #2:** Pay off the credit card within 18 months.

- **Goal #3:** Decide whether to pause the $200/month 529 contribution and redirect it toward accelerated credit card payoff, then resume 529 contributions after the card is paid off.

Daniela has come to you, a financial planner, for guidance regarding her financial situation. Respond to parts A, B, and C.

(A) Using data from the scenario, identify a difference between Daniela's total monthly essential needs spending (mortgage + HOA + utilities + groceries + transportation) and the amount the 50/30/20 guideline would allocate to needs from her take-home pay.

(B) Describe a financial challenge or opportunity indicated in the scenario that is currently impacting Daniela's ability to achieve her financial goals.

(C) Explain how a specific action taken by Daniela could help her achieve one of her financial goals.

Scoring Guideline — FRQ 2 (Total: 3 points)

Each part is worth 1 point. As on the official exam, this rubric lists examples that earn the point; any response that meets the criterion earns credit.

(A) — 1 point. Examples that earn this point include:

- Daniela's needs spending is $3,230 (mortgage $1,740 + HOA $180 + utilities $210 + groceries $480 + transport $620), while the 50% needs target is 0.50 × $4,980 = $2,490 — a difference of $740.
- Her needs exceed the 50/30/20 needs allocation by $740.
- Needs consume about 65% of take-home pay versus the 50% guideline.

Does not earn: restating one figure with no comparison (e.g., "Her mortgage is $1,740").

(B) — 1 point. Examples that earn this point include:

- Her emergency fund is far short of the goal: at $150/month it would take about 88 months to reach the $19,380 six-month target, versus her 30-month timeline — so she is not on track for Goal #1.
- The $4,800 credit card balance at 19.99% APR is high-cost debt slowing progress toward her goals.
- Opportunity: she already captures the full 5% employer 401(k) match, so her retirement contributions earn "free" employer dollars.

Does not earn: a general statement with no link to her goals (e.g., "She should budget better").

(C) — 1 point. Examples that earn this point include:

- Pausing the $200/month 529 contribution and redirecting the freed $200 plus the $65 minimum ($265/month) to the credit card pays off the $4,800 balance at 19.99% APR in about 22 months once accruing interest is included — far faster than the $65 minimum alone, which is below the roughly $80/month interest charge and therefore never retires the balance (it keeps growing). To pay the card off within the 18-month target (Goal #2), she would need about $310/month.
- Raising her monthly emergency-fund deposit to about $439 would reach the $19,380 six-month target within her 30-month goal: ($19,380 – $6,200) / 30 ≈ $439.
- Keeping the 401(k) at 6% still captures the full 5% match, so redirecting spare cash to the highest-APR debt maximizes net benefit.

Does not earn: naming an action with no link to a goal or no reasoning (e.g., "She should save more").

FRQ 3 — Business Concept Application

Talia is the operations director at Kinetic PT, a 4-location physical therapy practice based in suburban Colorado. The practice has 37 full-time clinicians. Over the past three years, Kinetic PT has been gathering evidence to inform a strategic plan focused on reducing patient churn and improving clinic efficiency. The table below summarizes the evidence collected.

Metric	Location A	Location B	Location C	Location D	Practice Average
Patient Discharge Completion Rate (% completing full plan of care)	61%	74%	58%	80%	68%
90-Day Retention Rate (% of patients who return within 90 days if recommended)	44%	67%	40%	72%	56%
New Patient Wait Time (days)	6	9	4	11	7.5
Net Promoter Score (NPS)	52	71	48	78	62
Clinician Turnover Rate (trailing 12 months)	29%	8%	34%	5%	19%

Note: Higher discharge completion, higher retention, and higher NPS all indicate better patient outcomes and loyalty. Lower wait times generally indicate easier access and better scheduling efficiency. Lower clinician turnover indicates greater staffing stability.

Respond to parts A, B, and C.

(A) Describe a market research method Talia (Kinetic PT) used to gather the information represented in the scenario.

(B) Describe a finding revealed by the research.

(C) Explain how Kinetic PT could use a finding from the research to achieve a business goal.

Scoring Guideline — FRQ 3 (Total: 3 points)

Each part is worth 1 point. This rubric lists examples that earn the point.

(A) — 1 point. Examples that earn this point include:

- Kinetic PT gathered internal operational data across its four locations over three years (discharge, retention, wait time, turnover metrics).
- The practice collected primary-source patient feedback to calculate its Net Promoter Score by location.
- They compiled a location-by-location performance dashboard to compare clinics.

Does not earn: naming a finding instead of a method (e.g., “Location D had an NPS of 78”).

(B) — 1 point. Examples that earn this point include:

- Location D is the strongest clinic: 80% discharge completion, 72% 90-day retention, NPS of 78, and the lowest clinician turnover (5%).
- Location C is the weakest: 40% retention (lowest), NPS of 48 (lowest), and 34% clinician turnover (highest).
- Clinician turnover moves inversely with patient outcomes — low-turnover clinics (D: 5%, B: 8%) show high retention and NPS, while high-turnover clinics (C: 34%, A: 29%) show low retention and NPS.

Does not earn: a vague claim with no data (e.g., “Some clinics do better than others”).

(C) — 1 point. Examples that earn this point include:

- Kinetic PT can use the turnover–retention link to invest in clinician retention at Locations C and A, aiming to raise patient retention and NPS.
- It can use Location D’s results as a model to replicate its staffing and care practices across weaker clinics to reduce patient churn.
- It can target training and support at Location C, whose weak metrics suggest the largest recoverable gains.

Does not earn: restating a finding without linking it to a business goal or action.

FRQ 4 — Business Decision

Maplewood Cabinet Co. is a mid-sized manufacturer of custom kitchen and bathroom cabinetry based in rural Wisconsin. The company currently purchases all cabinet-grade plywood from three regional distributors at an average cost of $48 per sheet. Maplewood uses approximately 14,000 sheets per year. The company has 62 employees and $9.2 million in annual revenue. Demand for custom cabinetry has grown 18% over the last two years, and lead times have extended from 5 weeks to 9 weeks due to supply constraints.

The ownership team is deciding between two strategic options:

Option 1 — Vertical Integration: Acquire a small regional plywood mill (Northbrook Lumber) for $3,100,000. The acquisition would allow Maplewood to produce its own plywood at an estimated variable cost of $31 per sheet for the same quality grade. Northbrook currently employs 18 people and has milling capacity of up to 22,000 sheets per year. Capital for the acquisition would come from a bank loan at 7.2% interest over 10 years.

Option 2 — Strategic Supplier Partnership: Negotiate a 5-year exclusive supply agreement with one of the three current distributors. The distributor has offered a locked-in price of $41 per sheet (vs. the current $48) in exchange for volume commitment of at least 12,000 sheets per year. No capital investment is required. The agreement includes a price-escalation cap of 3% per year.

The following financial data applies:

	Option 1 (Vertical Integration)	Option 2 (Supplier Partnership)
Plywood cost per sheet	$31 (variable production)	$41 (locked contract)
Annual sheet volume	14,000	14,000
Annual plywood cost	$434,000	$574,000
Capital investment	$3,100,000	$0
Annual loan payment (10 yr, 7.2%)	~$445,460	$0
Additional annual overhead (staffing, maintenance, management)	$185,000	$0

Respond to Parts A, B, and C.

(A) Maplewood Cabinet Co., like all businesses, is affected by internal, market, and external factors that affect its ability to achieve its goals.

- **i.** Describe an internal, a market, or an external factor indicated in the scenario that affects Maplewood.
- **ii.** Explain how the factor you selected in part A(i) creates an opportunity or a problem for Maplewood.

(B) Several financial and nonfinancial criteria can be used to compare Option 1 (Vertical Integration) and Option 2 (Supplier Partnership).

- **i.** Using net annual cash-flow impact as a criterion, describe a difference or similarity between the two options. Include specific evidence related to each option.
- **ii.** Using one additional financial criterion relevant to the decision, describe a difference or similarity between the two options. Include specific evidence related to each option.
- **iii.** Using one nonfinancial criterion relevant to the decision, describe a difference or similarity between the two options. Include specific evidence related to each option.

(C) Recommend a course of action for Maplewood. In your response you should:

- Recommend one of the two options.
- Explain why you recommend that option.
- Support your recommendation using any three specific criteria (financial and/or nonfinancial), including evidence from the scenario related to each criterion.

Scoring Guideline — FRQ 4 (Total: 8 points)

Rows 1–6 are worth 0 or 1 point each; Row 7 is graduated (0, 1, or 2 points). Total = 8 points.

Row	0 points — does not earn	1 point — earns	Brief example (earns / does not earn)
1 · A(i) — Factor	No factor, a factor not in the scenario, or one that is not internal/market/external.	Describes an internal, market, or external factor from the scenario that affects the business.	Earns: “Demand for custom cabinetry has grown 18% and lead times have stretched from 5 to 9 weeks.” Does not: “Maplewood has a decision to make.”
2 · A(ii) — Opportunity/ Problem	No or incomplete explanation linking the factor to an opportunity or a problem.	Explains how the A(i) factor creates an opportunity or a problem.	Earns: “Rising demand is an opportunity, but the 9-week lead time risks losing orders unless supply is secured.” Does not: “Demand is good.”
3 · B(i) — Net annual cash-flow impact	No comparison, wrong criterion, or no per-option evidence.	Compares the two options using net annual cash-flow impact with specific evidence for each.	Earns: “Option 2 costs ~$490,000 less per year than Option 1 (Option 1: $140,000 plywood savings – $630,460 in loan + overhead).” Does not: “Option 2 is cheaper.”
4 · B(ii) — Additional financial criterion	No comparison, a nonfinancial criterion, or no per-option evidence.	Compares the two options using a second financial criterion with evidence for each.	Earns: “Option 1 needs $3.1M in capital vs. $0 for Option 2.” Or: “Plywood is $31/ sheet under Option 1 vs. $41 under Option 2.” Does not: “Option 1 is expensive.”
5 · B(iii) — Nonfinancial criterion	No comparison, a financial criterion, or no per-option evidence.	Compares the two options using a nonfinancial criterion with evidence for each.	Earns: “Option 1 gives 22,000-sheet capacity (vs. 14,000 needed) and supply-chain control to cut the 9-week lead time; Option 2 creates exclusive-supplier dependency.” Does not: “Option 1 is more independent.”
6 · C — Recommendation	No recommendation, no reasoning, or a choice outside the two options.	Recommends one option and explains why.	Earns: “Choose Option 2 because it avoids $490,000/year in added cost and needs no capital.” Does not: “Both options have trade-offs.”
7 · C — Evidence (0–2)	No evidence, or only one criterion with evidence → 0.	Two criteria with evidence → 1 point; three criteria with evidence → 2 points.	2 pts: “Option 2 saves ~$490,000/year, requires $0 capital vs. $3.1M, and caps price increases at 3%/year — though it adds supplier-dependency risk.”

Row 7 is graduated: 0 points = one or no criteria supported with evidence; 1 point = two criteria with scenario evidence; 2 points = three criteria with scenario evidence.

Verified calculations: Annual plywood saving = $574,000 – $434,000 = $140,000. Annual loan payment is the amortized debt service on the $3,100,000 acquisition loan at 7.2% over 10 years: $3,100,000 × 0.072 ÷ (1 – 1.072^-10) ≈ $445,460. Option 1 added annual cost = $445,460 loan + $185,000 overhead = $630,460. Net = $140,000 – $630,460 = –$490,460, so Option 2 is about $490,000/year cheaper on a cash-flow basis. Option 2 is the more easily defended choice, though Option 1 is defensible on long-term supply-chain control and scalable capacity.

Scoring Summary

Section	Questions / Items	Points Available	% of Exam Score
Section I: Multiple Choice	60 questions	60 raw points	60%
Section II Part A: FRQ 1 (Business Canvas Validation)	1 question, 10 rows	10 points	15%
Section II Part B: FRQ 2 (Personal Finance)	3 parts (A, B, C)	3 points	part of 25%
Section II Part B: FRQ 3 (Business Concept Application)	3 parts (A, B, C)	3 points	part of 25%
Section II Part B: FRQ 4 (Business Decision)	7 rows (A–C)	8 points	part of 25%
Section II total		**24 raw points**	**40%**

FRQ point totals: FRQ 1 = 10 | FRQ 2 = 3 | FRQ 3 = 3 | FRQ 4 = 8 | **Section II = 24 raw points.** FRQ 1 is weighted 15% of the exam; Part B (FRQ 2–4) is weighted 25%.

How to use this paper: Count your MCQ raw score out of 60. Add your FRQ points for each question. Review missed items by unit using the unit tags below.

Unit	MCQ Questions
Unit 1 (Business, Markets, Entrepreneurship, Ethics)	1–14, 51–53
Unit 2 (Marketing: Consumer Behavior, Research, Pricing)	15–26
Unit 3 (Personal + Business Finance)	27–47

Unit	MCQ Questions
Unit 4 (Management, Supply Chain, Strategy)	48–50, 54–60

A note on score conversions: AP composite-to-1-to-5 conversions for AP Business with Personal Finance had not been published when this companion went to press. Use this paper to gauge mastery — count points earned out of total available, identify weak units, and revisit those chapters. Do not treat any third-party score band as official.