Question 1

Q1.1

Date			DR$	CR$
1/1/2024	Cash		5,000,000	
		Common Stock		2,000,000
		Additional Paid-in capital		3,000,000
1/1/2024	Machinery		600,000	
		Cash		600,000
1/1/2024	Prepaid rent		40,000	
		Cash		40,000
1/15/2024	Inventory		1,900,000	
		Accounts payable		700,000
		Cash		1,200,000
1/28/2024	Cash		1,520,000	
	Accounts receivable		240,000	
		Sales		1,760,000
1/28/2024	Bad debt expense		9,600	
		Allowance for doubtful accounts		9,600
1/30/2024	Retained earnings		1,000,000	
		Dividend payable		1,000,000
1/31/2024	COGS		1,340,000	
		Inventory		1,340,000
1/31/2024	Depreciation expense		5,185	
		Accumulated depreciation		5,185
1/31/2024	Rent expense		21,000	
		Prepaid rent		21,000

Q1.2

Beize Inc.			
Income statement for the period ended 31st January 2024			
			In $
Sales			1,760,000.0
COGS			-1,340,000.0
Gross profit			**420,000.0**
Rent expense			-21,000.0
Bad debt expense			-9,600.0
Depreciation expense			-5,185.2
Net income			**384,214.8**

Q1.3

Beize Inc.	
Cash flow statement for the pertod ended 31st January 2024	
	In $
Operating activities	
Net income	384,214.8
Add: Depreciation	5,185.2
Less: Increase in net accounts receivable	-230,400.0
Less: Increase in prepaid rent	-19,000.0
Less: Increase in inventory	-560,000.0
Add: Accounts payable	700,000.0
Total cash from operating activities	**280,000.0**
Investing activities	
Purchase of machinery	-600,000.0
Total cash from investing activities	**-600,000.0**
Financing activities	
Issuance of stock	5,000,000.0
Total cash from operating activities	**5,000,000.0**
Total cash from period	**4,680,000.0**

Q1.4

Beize Inc.	
Balance sheet as of 31st January 2024	
	In $
Current assets	
Cash	4,680,000.0
Accounts receivable	240,000.0
Less: Allowance for doubtful accounts	-9,600.0
Prepaid rent	19,000.0
Inventory	560,000.0
Total current assets	**5,489,400.0**
Noncurrent assets	
Machinery	600,000.0
Less: Accumulated depreciation	-5,185.2
Total noncurrent assets	**594,814.8**
Total assets	**6,084,214.8**
Current liabilities	
Accounts payable	700,000.0
Dividend payable	1,000,000.0
Total current liabilities	**1,700,000.0**
Shareholders Equity	
Common Stock	2,000,000.0
Additional Paid-in capital	3,000,000.0
Retained earnings	-615,785.2
Total shareholders equity	**4,384,214.8**
Total liabilities and shareholders equity	**6,084,214.8**

Q1.5

Date			DR$	CR$
2/2/2024	Inventory		400,000	
		Cash		400,000
2/8/2024	Accounts receivable		700,000	
		Sales		700,000
2/8/2024	Bad debt expense		28,000	
		Allowance for doubtful accounts		28,000
2/16/2024	Dividend payable		1,000,000	
		Cash		1,000,000
2/21/2024	Treasury stock		400,000	
		Cash		400,000
2/26/2024	Inventory		180,000	
		Cash		180,000
2/29/2024	COGS		490,000	
		Inventory		490,000
2/29/2024	Depreciation expense		5,185	
		Accumulated depreciation		5,185
2/29/2024	Rent expense		21,000	
		Prepaid rent		19,000
		Accrued rent		2,000

Here, I have assumed that we continue from January such that when we calculate COGS, we use periodic FIFO still and calculate COGS based on the first units available for January that have not been sold in January.

Additionally, we take into account the adjusting entries of depreciation and rent expense in February as well.

Q1.6

Beize. Inc			
Income statement for February 2024			
			In $
Sales			700,000
COGS			-490,000
Gross profit			**210,000**
Rent expense			-21,000
Bad debt expense			-28,000
Depreciation expense			-5,185
Net income			**155,815**

Here, it is assumed that the income statement should only be for February 2024, and not also for January 2024.

Q1.7

Beize. Inc	
Cash flow statement for February 2024	
	In $
Operating activites	
Net income	155,815
Add: Depreciation	5,185
Less: Increase in net accounts receivable	-672,000
Add: Decrease in prepaid rent	19,000
Add: Increase in accrued rent	2,000
Less: Increase in inventory	-90,000
Cash from operating activites	**-580,000**
Investing acitivites	
Cash from investing activities	**0**
Financing activites	
Dividends paid	-1,000,000
Treasury stock	-400,000
Cash from financing activites	**-1,400,000**
Total cash from period	**-1,980,000**
Beginning cash	4,680,000
Ending cash	2,700,000

Q1.8

Beize. Inc	
Balance sheet as of February 29, 2024	
	In $
Current assets	
Cash	2,700,000
Accounts receivable	940,000
Less: Allowance for doubtful accounts	-37,600
Inventory	650,000
Total current assets	**4,252,400**
Noncurrent assets	
Machinery	600,000
Less: Accumulated depreciation	-10,370
Total noncurrent assets	**589,630**
Total assets	**4,842,030**
Current liabilities	
Accounts payable	700,000
Accrued rent	2,000
Total current liabilities	**702,000**
Shareholders equity	
Common Stock	2,000,000
Additional Paid-in capital	3,000,000
Retained earnings	-459,970
Less: Treasury Stock	-400,000
Total shareholders equity	**4,140,030**
Total liabilities and shareholders equity	**4,842,030**

Question 2

Q2.1 Calculate and summarize how the monthly financial statements for January and February (from Q1.2-Q1.4 and Q1.6-Q1.8) would have been reported if Beize Inc. had used average cost method (instead of FIFO). Identify one financial ratio that is affected by whether Beize inc. uses FIFO or average cost method (You may refer to Figure 1 at the end of this exam).

For average cost method, we assume it is still periodical.

Firstly, we calculate the differences for **Q1.2-Q1.4:**

If this had been the case, weighted average cost per unit for January would have been: 1900000 / 30000 = **63.33$ per unit.**

COGS would thus have been: 63.33 * 22000 = $1,393,333.

On the income statement this would lead to the following:

Beize Inc.			
Income statement for the period ended 31st January 2024			
			In $
Sales			1,760,000.0
COGS			-1,393,333.3
Gross profit			**366,666.7**
Rent expense			-21,000.0
Bad debt expense			-9,600.0
Depreciation expense			-5,185.2
Net income			**330,881.5**

Here, we see COGS is higher by $53,333.3 compared to when we used FIFO (since COGS under FIFO was $1,340,000). This decreases net income by the same amount.

On the balance sheet it has the following effect:

Beize Inc.	
Balance sheet as of 31st January 2024	
	In $
Current assets	
Cash	4,680,000.0
Accounts receivable	240,000.0
Less: Allowance for doubtful accounts	-9,600.0
Prepaid rent	19,000.0
Inventory	506,666.7
Total current assets	**5,436,066.7**
Noncurrent assets	
Machinery	600,000.0
Less: Accumulated depreciation	-5,185.2
Total noncurrent assets	**594,814.8**
Total assets	**6,030,881.5**
Current liabilities	
Accounts payable	700,000.0
Dividend payable	1,000,000.0
Total current liabilities	**1,700,000.0**
Shareholders Equity	
Common Stock	2,000,000.0
Additional Paid-in capital	3,000,000.0
Retained earnings	-669,118.5
Total shareholders equity	**4,330,881.5**
Total liabilities and shareholders equity	**6,030,881.5**

We here see that the value of inventory is $506,666.7 when using WAC, whereas for FIFO it was $560,000. This is exactly the same amount as COGS increased by, on the income statement which is $53,333.3.

We also see retained earnings is reduced by this same amount ($53,333.3) to -$669,118.5, which is due to the net income being lower by $53,333.3. Thus, the balance sheet balances.

On the cash flow statement, we see that it has no effect on the total cash flow from the period, and it also does not change the total cash flow from operating, investing and financing activities. But, under operating activities, we find that net income has decreased by $53,333.3 and that this is exactly offset by the decrease in inventory of the same amount.

Beize Inc.	
Cash flow statement for the pertod ended 31st January 2024	
	In $
Operating activities	
Net income	330,881.5
Add: Depreciation	5,185.2
Less: Increase in net accounts receivable	-230,400.0
Less: Increase in prepaid rent	-19,000.0
Less: Increase in inventory	-506,666.7
Add: Accounts payable	700,000.0
Total cash from operating activities	**280,000.0**
Investing activities	
Purchase of machinery	-600,000.0
Total cash from investing activities	**-600,000.0**
Financing activities	
Issuance of stock	5,000,000.0
Total cash from operating activities	**5,000,000.0**
Total cash from period	**4,680,000.0**

Now we calculate the differences for Q1.6-Q1.8.

Firstly, we calculate WAC to be: 2458000 / 37000 = **$66.43**

In our WAC-calculation, we recognize that February is a new period for this firm, and thus, the sales made in January means that these units (and the cost), was not available as beginning inventory for the firm.

Now, we can calculate the new COGS for the firm:

$66.43 * units sold in period = COGS

$66.43 * 7000 = $465027.

Since COGS under FIFO was $490000, we find that COGS, by using WAC has decreased by $490000 - $465027 = **$24973**. We thus see that this decrease in COGS increases net income by the same amount and is now equal to $180,788. See picture below.

Beize. Inc			
Income statement for February 2024			
			In $
Sales			700,000
COGS			-465,027
Gross profit			**234,973**
Rent expense			-21,000
Bad debt expense			-28,000
Depreciation expense			-5,185
Net income			**180,788**

On the cash flow statement, we see that it has no effect on the total cash flow from the period, and it also does not change the total cash flow from operating, investing and financing activities. But, under operating activities, we find that net income has increased by $24973 and that this increase is exactly offset by the increase in inventory of the same amount. See picture below.

Beize. Inc			
Cash flow statement for February 2024			
			In $
Operating activites			
Net income			180,788
Add: Depreciation			5,185
Less: Increase in net accounts receivable			-672,000
Add: Decrease in prepaid rent			19,000
Add: Increase in accrued rent			2,000
Less: Increase in inventory			-114,973
Cash from operating activites			**-580,000**
Investing acitivites			
Cash from investing activities			**0**
Financing activites			
Dividends paid			-1,000,000
Treasury stock			-400,000
Cash from financing activites			**-1,400,000**
Total cash from period			**-1,980,000**
Beginning cash			4,680,000
Ending cash			2,700,000

On the balance sheet, we see that inventory is lower by $28360 as of 29th February. This decreases the assets by the same amount. And on the liabilities and equity side, we find that retained earnings has decreased by the same amount. Such that the balance sheet again balances. See picture below.

Beize. Inc	
Balance sheet as of February 29, 2024	
	In $
Current assets	
Cash	2,700,000
Accounts receivable	940,000
Less: Allowance for doubtful accounts	-37,600
Inventory	621,640
Total current assets	**4,224,040**
Noncurrent assets	
Machinery	600,000
Less: Accumulated depreciation	-10,370
Total noncurrent assets	**589,630**
Total assets	**4,813,669**
Current liabilities	
Accounts payable	700,000
Accrued rent	2,000
Total current liabilities	**702,000**
Shareholders equity	
Common Stock	2,000,000
Additional Paid-in capital	3,000,000
Retained earnings	-488,331
Less: Treasury Stock	-400,000
Total shareholders equity	**4,111,669**
Total liabilities and shareholders equity	**4,813,669**

One financial ratio that is affected is **the inventory turnover ratio**, since FIFO and WAC results in different COGS and different average inventories.

Q2.2 Ignore your answer to Q2.1. Calculate and summarize how the two monthly financial statements for January and February (from Q1.2-Q1.4 and Q1.6-Q1.8) would have been reported if Beize Inc. on February 1, 2024 had changed the estimated useful life of the machinery from nine years to five years

For the January financial statements, it would have led to no changes on any of the financial statements. Thus, there are no changes to the income statement, the balance sheet and the cash flow statement.

For February, it would have the following effect:

The depreciation expense for February would be:

Depreciation expense = ((600000-5000-40000)/(4+0.91667))/12 = **$9403.64**

In the equation, we recognize that the remaining useful life is only 4.91667 years and not exactly 5 years, since 1 month has passed.

The income statement would then have been reported as below, where see the higher depreciation expense, which is higher by $4218 and thus reduces net income by the same amount. See picture below.

Beize. Inc			
Income statement for February 2024			
			In $
Sales			700,000
COGS			-490,000
Gross profit			**210,000**
Rent expense			-21,000
Bad debt expense			-28,000
Depreciation expense			-9,404
Net income			**151,596**

On the cash flow statement, we see that it has no effect on the total cash flow from the period, and it also does not change the total cash flow from operating, investing and financing activities. But, under operating activities, we find that net income has decreased by $4218 and that this decrease is exactly offset by the increased add-back in depreciation which increases by $4218 (from $5185 to $9404). See picture below.

Beize. Inc	
Cash flow statement for February 2024	
	In $
Operating activites	
Net income	151,596
Add: Depreciation	9,404
Less: Increase in net accounts receivable	-672,000
Add: Decrease in prepaid rent	19,000
Add: Increase in accrued rent	2,000
Less: Increase in inventory	-90,000
Cash from operating activites	**-580,000**
Investing acitivites	
Cash from investing activities	**0**
Financing activites	
Dividends paid	-1,000,000
Treasury stock	-400,000
Cash from financing activites	**-1,400,000**
Total cash from period	**-1,980,000**
Beginning cash	4,680,000
Ending cash	2,700,000

On the balance sheet, we find that total assets have decreased by $4218 which is due to the increase in accumulated depreciation, which lowers the value of the noncurrent assets. On the liabilities and equity side, retained earnings is lower by $4218, since the net income from February 2024 was lower by this amount. Thus, the balance sheet again balances. See picture below.

Beize. Inc	
Balance sheet as of February 29, 2024	
	In $
Current assets	
Cash	2,700,000
Accounts receivable	940,000
Less: Allowance for doubtful accounts	-37,600
Inventory	650,000
Total current assets	**4,252,400**
Noncurrent assets	
Machinery	600,000
Less: Accumulated depreciation	-14,589
Total noncurrent assets	**585,411**
Total assets	**4,837,811**
Current liabilities	
Accounts payable	700,000
Accrued rent	2,000
Total current liabilities	**702,000**
Shareholders equity	
Common Stock	2,000,000
Additional Paid-in capital	3,000,000
Retained earnings	-464,189
Less: Treasury Stock	-400,000
Total shareholders equity	**4,135,811**
Total liabilities and shareholders equity	**4,837,811**

Question 3

1) False. Non-current liabilities are reported at present value. Current liabilities are recorded at nominal value.
2) False. Earnings (if positive) increase the value of an investment. Dividends and losses decrease the value of the investment, under the equity method.
3) False. Dividends decreases the value of the investment, under the equity method.
4) True
5) False. Dividends declared do not affect the cash flow statement.
6) False. IFRS allows for research and development expenditures to be capitalized and then amortized
7) True. It makes earnings per share less negative. Note that net income minus preference dividends still has to be a negative number.
8) False. It decreases earnings per share.
9) False. Deferred tax liabilities are not discounted.
10) True
11) False. Only if the firms intend to hold them until maturity. Otherwise, they could be classified as trading securities or available-for-sale.
12) This is ambiguous. If the legal title has been transferred, and cash has been received it is unearned revenue. But just because the customer has not yet received the product, does not necessarily mean that it is unearned revenue.
13) True
14) True
15) False. It is a contra account to accounts receivables
16) False. Bad debt expense is recorded on the income statement. It is Allowance for uncollectible accounts that is a contra asset account to account receivable.
17) True
18) True

Question 4

Q4.1

Fiscal year	2022	2023	Difference	% change
Sales revenue	2000	2200	200	10.0%
Less: Cost of Goods Sold	1700	1810	110	6.5%
Gross profit	300	390	90	30.0%
Less: Selling and administrative expenditures	210	214	4	1.9%
Operating profit	**90**	**176**	86	95.6%

From the horizontal analysis, we can see that sales revenues increases by 10% from 2022 to 2023, which is an increase of 200 in sales revenue. In the same period, we find that COGS only increases by 90, reflecting an increase of 6.5% from 2022 to 2023.

This contributes to the increase in gross profit, which we find increases by 30% from 2022 to 2023, representing an increase of 90 from 2022 to 2023. The SG&A increases by 4, which is an increase of 1.9% year-over-year. This is significantly less than the increase in revenue.

We find that the operating profit increases by 95.6% from 2022 to 2023, representing an increase of 86. This increase is driven by the % increase in revenues being larger than the % increase in both COGS and SG&A.

Q4.2

Fiscal year		2022	% of sales	2023	% of sales
Sales revenue		2000	100.0%	2200	100.0%
Less: Cost of Goods Sold		1700	85.0%	1810	82.3%
Gross profit		300	15.0%	390	17.7%
Less: Selling and administrative expenditures		210	10.5%	214	9.7%
Operating profit		**90**	4.5%	**176**	8.0%

From the vertical analysis we find that COGS as a % of sales has decreased from 85% to 82.3% from 2022 to 2023, representing a decrease of 2.7 percentage points, which has contributed to the increase in gross profit of 2.7 percentage points.

We find that S&A expenses as a % of sales has decreased from 10.5% to 9.7% of revenue, reflecting a decrease of 0.8 percentage points, which is driven by the increase in sales, which more than makes up for the fact that S&A in absolute terms increases by 4 from 2022 to 2023.

Ultimately, we see a significant increase in operating profit as a % of sales (operating margin), increasing from 4.5% in 2022 to 8% in 2023, representing an increase of 3.5 percentage points. This is both due to the decrease in COGS as a % of sales, and the decrease in SG&A as a % sales. Also note that both COGS and SG&A increases in nominal terms, but the increase in revenue from 2022 to 2023 outweighs this increase.

Q4.3

The vertical analysis can be improved by splitting the costs for both COGS (Cost of goods sold) and S&A (selling and administrative expenses) up into what is variable and what is fixed. This way we get a better view of how the variable costs has increased in relation to revenue, and whether the variable costs increase as a % of revenue, which would lower the contribution margin, or whether it decreases.

Likewise, we would also better be able to understand how the fixed costs develop in relation to sales, where we could expect larger changes in % of the fixed costs in relation to sale, compared to for sales and variable costs which are usually more closely correlated, given the variable component.

I have made an example below using made up numbers. Here we would see that contribution margin decreases slightly by 0.5 percentage points from 20% in 2022 to 19.5% 2023. However, we find that it is relatively stable. Likewise, we see that the fixed costs in % of revenue decreases, which is also what we would expect. Additionally, we see that the operating profit in actual numbers is the same as for the vertical analysis above.

Fiscal year		2022	% of sales	2023	% of sales
Sales revenue		2000	100.0%	2200	100.0%
Less: Variable costs		1600	80.0%	1750	79.5%
Contribution margin		**400**	20.0%	**450**	20.5%
Less: Fixed costs		310	15.5%	274	12.5%
Operating profit margin		**90**	4.5%	**176**	8.0%