National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

Exemplar for Internal Achievement Standard

Commerce Level 1

This exemplar supports assessment against:

Achievement Standard 92029

Demonstrate understanding of price determination for an organisation

An annotated exemplar is a sample of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade.

New Zealand Qualifications Authority

To support internal assessment

Grade: Achieved
For Achieved, the student needs to demonstrate understanding of price determination for an organisation. This involves using financial or non-financial information to describe how a price has been determined, using a model or concept. This student has used financial information (costing of 48c plus markup of 300%) to support their price of $2.00 for a lolly bag. The student explained that they have rounded their price from $1.92 to $2.00 because it is easier for a cash only market day, as no change would be required. A table was provided to show the costs, mark-up, and selling price. An income statement showed the sales, cost, and projected profit. Sales volumes were estimated from market research. For Merit, the 10% tax was accurately applied to the projected income statement showing sales at a price of $2.00, and the impact on profit was correctly explained. However, to gain the grade, two pricing options chosen from changing (increase/decrease) or not changing the price should be explained. The student mentioned a higher price of $2.50, therefore another income statement based on this pricing option, also showing the 10% tax, would have to be included. Evidence would also include information from this income statement in the explanation of the higher pricing option.

This term our commerce class has been planning an Easter market day for the school to buy easter gifts for family and friends. We sold Easter bags. Our bags consist of sour lollies, mini marshmallows, mini eggs and Mentos.

The pūtake of our business is to provide our fellow students with affordable gifts for Easter without having to go to town and buy an expensive gift. We also want to make a good profit to pay back everyone who bought the ingredients to make the lolly bags and leave an amount leftover to reward us for the work involved in making up the bags and setting up a stall and running it.

Most students and staff enjoy lollies and is something most students would most want to buy. We also wanted to keep our product mostly recyclable so we used paper bags instead of plastic bags.

Our suppliers were Cracker Jack, New World and Uncle Bills. Cracker jack was our main supplier who supplied us with our lollies for our lolly bags. Uncle bills supplied the stickers to decorate the bags and the cellophane bags which we had sold for $2.00 to our classmates because we decided to go with the paper bags instead.

Setting my price for the lolly bags:

To get the price I calculated the unit cost of producing the product of 48c then added a 300% markup to come to $1.92.

I used the cost-plus model to get my price which is when you add a percentage onto the cost of how much is needed to make a decent profit. I tried to accurately find the cost of how much it would cost to make one bag and how much lollies each bag would consist of. I then needed to figure out how many extra costs I would need to pay. I then added 300% onto the cost of 48 cents to come to $1.92.

This means that the cost of all the lollies, chocolate and packaging came to 48 cents. But adding the 300% markup to cover all the extra costs like decorating for the stall and advertising more made the price come to $1.92.

Mini mini eggs	140@4.50	$0.13		4 per bag
Mini marshmello	190@3.30	$0.09		5 per bag
Sours	98@5.40	$0.11		2 per bag
Mentos	133@5.00	$0.11		3 per bag
Stickers	49 at 98c	$0.02		1 per bag
Bags		$0.02		
Cost of one lolly bag		$0.48		
300% mark-up		$1.44		
Price starting point		$1.92	1	

300 % mark-up was used as this gave me a price of $1.92 to work with. That was a reasonable starting point compared to similar products you could buy from the local dairy for example. Similar lolly bags in the dairy were $2-$2.50. Using the cost plus price of 96c (with 300% markup) I did some more work on our pricing calculations.

When my group surveyed some students in the school asking how much they were willing to pay for our product, 56% of students said they would pay $2.00 and 41% said they would pay $2.50.

Having my price already in that range at $1.92 I looked at increasing it to $2.00 to make it good for our target market. They were willing to buy the product and pay the price I had come up with considering the majority of students said they would buy our product. I thought if it was any higher than $2.00 it would be less appealing to the target market.

These are graphs of our responses from our market research with the prices they were willing to pay and if they were willing to buy our product.

Our product is aimed towards the year 7- 13 students at [redacted] College so we wanted to keep the price as low as possible with a lot of students who don't have an income to afford expensive gifts. This was our pūtake and we also didn't want anyone feeling left out of the Easter market as there were no items they could afford. Our products also had to attract this age group with the type of lollies they like and packaging that would appeal to them. I am sure we can produce the lolly bags for this price of $2.00.

No big stores were selling the equivalent gift bags that we were the closest you could buy would be a lolly bag from the local dairy for $2.00 so that came to a factor that we didn't want to have a higher price. Although our Easter bags were designed for a gift for Easter rather than just a lolly bag. The closest product to ours at the market day would have been Mrs [redacted] with her Easter baskets but they were double the cost and were larger and baskets rather than our bags, so this didn't affect our pricing decision. Another reason I rounded the lolly bag price to $2.00 was because it was a cash only market with no EFTPOS because we didn't have the machines and weren't able to use our phones to transfer money. $2.00 meant change giving was easy and we could quickly make sales transactions and not keep our customers waiting so increase sales volumes to the best we could.

Another factor that affected my price was the cost of production because it needed to cover what it cost and that affected my price because it had to be higher than $1.50 to cover all costs so $2.00 was a good round number. This price would cover the cost of the decorations and products we used to make the bags, and we would make a good profit. We also didn't want to have to deal with 50c change so we could have quick sales which would result in more sales.

The estimated income statement for sales of lolly bags (at 35 bags estimated from market research).

Sales	$70.00
Less cost of goods sold	$16.80
Gross profit	$53.20
Less	
Marketing costs	$2.50
Estimated net profit	$50.70

This provided us the stall holders with a good profit after all the costs of the lolly bags were met and left us a good profit for our work. It also was a good buffer for any unexpected costs that could arise.

Factor that could change my pricing:

Then we had the surprise change in having 10% of each sale going towards a charity. This was added by Mrs [redacted] just before market day.

Expected sales of 35 lolly bags	
Income statement	
Sales	S70.00
Less cost of goods sold	S16.80
Gross profit	S53.20
Less	
Stall costs	S2.50

Net Profit	S50.70
Less tax 10%	S7.00
Net profit after tax	S43 70

This meant we made only $43.70 profit compared to $50.70 as before.

I could have increased our price to $2.50 but having a higher price meant it would be less appealing to customers. So I decided to stick with $2.00 because even with the 10% we were still making a decent profit with enough to pay off the loans and costs. Having done our market research most people were willing to pay no more than $2.00 so I didn't want to increase the price which might have resulted in less sales and a smaller profit. But if I had gone with a higher price the charity would have got a larger donation but we may have not sold as many so they most likely got a larger donation than they would have if I increased the price because of less sales.

Having decided the price of $2.00 it meant that we would be able to pay back the money we borrowed, and it was a price that most people were willing to pay. So it was a good decision for our customers and the members of our business.

Overall, $2.00 was the best price for our product. It gave us a decent profit and was appealing to our target market being cheaper.

The stakeholders of our business were us the stall holders and our customers. We would be affected by keeping our price the same because we would earn 10% less profit than we originally intended on making. But if the price was increased we would make the intended profit with the 100% markup and 10% extra going towards the charity. The customers would be affected by a higher price because they would lose more money or not be able to afford our product and at the original price they would more likely be able to afford our product.

Grade: Merit
For Merit, the student needs to examine price determination for an organisation. This involves: • explaining how the price could be affected by a change in an internal or external factor • explaining options for changing, or not changing, the price • using financial or non-financial information, and a concept or model to support the explanation. This student has explained how the minimum wage increase of $2,000 per worker (i.e. $4,000 for two workers) would increase costs and decrease profit. Four pricing options were considered in response to an increase in the minimum wage, and a decision was made to retain the original price of $38 for a garden service. The pricing options were to keep the original price, a lower price, and two higher prices. Reworked income statements for all four pricing options were included to reflect the higher minimum wage and its impact on profit and landscape hours. Two pricing options were explained using information from the reworked income statements. For Excellence, the student could include in the justification for retaining the original price more reasons supported by financial information from the reworked income statement, rather than focus on comparing to the three other pricing options. Sufficient detail was provided in the explanation of how stakeholders would be impacted.

Merit

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Background Information

Willow has always wanted to work outdoors and has a passion for gardening and landscaping. She has set up her business called Harmony Gardens which specialises in any gardening related jobs around the house such as lawn mowing, hedge trimming, weeding and even water blasting pavements. She has hired additional workers, Olive and Cedar, who work in the business and they all complete similar jobs. They often complete jobs individually and therefore can complete a large number of jobs per day as a business. Willow also wants to serve her community by completing gardening work for those busy with young children, full time jobs and/or those without the ability or equipment to tend to their own gardens and lawns. She wants to also provide this service at a fair and affordable price for her clients. This is her pūtake/mission.

While Willow hopes to provide an affordable service to her clients, she has also identified that she needs to earn a profit of $65,000 annually to remain economically sustainable.

The other landscaping businesses in the area who provide similar services are:
a. Blissful Gardens who charge $45 per hour.
b. Serenity Landscapes who charge $50 per hour.
c. Zen Garden & Landscaping who charge $55 per hour.

The maximum number of hours that Willow and her team could spend landscaping each year is 4,500.

Market research conducted shows that at the following prices, this would be the quantity demanded for hours of landscaping.

Price	Quantity demanded	Income
$34.00	4,700	$159,800
$36.00	4,550	$163,800
$38.00	4,400	$167,200
$40.00	4,100	$164,000
$42.00	3,500	$147,000
$44.00	3,300	$145,200
$46.00	3,100	$142,600
$48.00	2,900	$139,200
$50.00	2,400	$120,000

Here is a breakdown of their projected costs:
a. Willow's workers, Olive and Cedar, are each paid a salary of $40,000 each.
b. Vehicle expenses are expected to cost $0.90 per hour of landscaping.
c. Vehicle Insurance is $1,150 per year.

d. Willow pays $350 for Advertising each year through Social Media platforms.
e. Willow also expects to pay $2,500 during the year for Repairs & Maintenance on her tools & equipment.
f. Supplies used for Landscaping are expected to cost $0.40 per hour of landscaping.
g. General Business Expenses are $4,000 per year.
h. Accountancy Fees are $650 per year.
i. The business took a loan out and the interest for the loan is $275 for the year.

Break-Even Analysis

Expense	Variable or Fixed?
Workers' salaries	Fixed
Vehicle expenses	Variable
Vehicle insurance	Fixed
Advertising	Variable
Repairs and maintenance	Variable
Supplies used	Variable
General business expenses	Variable
Accountancy Fees	Variable
Interest on loan	Fixed

Projected Income Statement

Expense	Landscaping, Administrative or Finance cost?
Workers' salaries	Landscaping
Vehicle expenses	Landscaping
Vehicle insurance	Landscaping
Advertising	Landscaping
Repairs and maintenance	Landscaping
Supplies used	Landscaping
General business expenses	Administrative
Accountancy Fees	Administrative
Interest on loan	Finance

Determine an appropriate price for one hour of Landscaping for Harmony Gardens.
Using Sheet One, create either or both a Projected Income Statement or a Break-Even Analysis to support your decision. You may choose to use both models. Copy and paste your model(s) below.

Harmony Gardens Projected Income Statement for the year ended 31.3.24 Price $38. Hours of landscaping 4,400.			
	$	$	$
Revenue/income			167,200
Less Expenses			
Landscaping costs			
Worker salaries	80,000		
Vehicle expenses	3,960		
Vehicle insurance	1,150		
Advertising	350		
Repairs and maintenance	2,500		
Supplies used	1,760	89,720	
Administration costs			
General business expenses	4,000		
Accounting fees	650	4,650	
Finance costs			
Interest on loan	275	275	
Total expenses			94645
Projected profit for the year			$72,555

Identify the price you have chosen to be used by Harmony Gardens. Fully explain why you have chosen this price.

a. **You must include detailed reference to your economic model(s)**
b. **You must also use detail from the background information, including the pūtake.**

I have chosen $38 to be the price used by Harmony Gardens because my projected income statement shows it provides a total profit of $72,555 (sales $167,200 minus expenses $94,645). It exceeds the profit target of $65,000 by $7,555 which creates a solid buffer for the business.

It is important to have a good buffer so there are extra funds available when there are unexpected expenses or less customers. Another main reason that I chose this price is because it aligns with the business' pūtake of serving the community by completing gardening work for those busy with young children, full time jobs and/or those without the ability or equipment to tend to their own gardens and lawns.

At the price of $38 per hour the three gardeners will each work 1,466.67 - (4,400/3) hours annually, which means 28.21 hours each, per week. The 4,400 hours is 100 hours below the relevant range of 4,500 hours annually.

Harmony Gardens' price of $38 is the cheapest service in the area. It is much more affordable than their cheapest competitor Blissful Gardens who charge $45, followed by Serenity Landscapes at $50 and the most expensive service provided by

Zen Garden & Landscaping for $55. Harmony Gardens would be undercutting the other local services by a minimum of $7 which is a significant price difference that is likely to attract customers to the new business. As people begin to use the service, word of mouth is likely to make it more well known and increase business. Overall, I consider the price of $38 per hour to be a sensible price for Harmony Gardens because it supports the pūtake of: providing a gardening service at a fair and affordable price for their clients, while remaining economically sustainable. It is also sensible because it is $7 cheaper than the cheapest competitor making it more attractive e.g. because it is a lot more affordable than them. The last two reasons why it is a good price is because it is well within their workable hours, which provides some leniency if there aren't as many customers as expected. Whilst doing that it also provides the business with a $7555 buffer, which could save this business from going bankrupt or broke, if there are any extra unexpected costs. The other prices except for $40 do not meet most of what is said above, which means that they then become unviable prices.

One year later, the New Zealand Government raised the minimum wage which will force Willow to increase the salaries for her two additional workers. Each worker will be paid an extra $2,000 per year.

Explain how the new raised Minimum Wage may impact the price charged by Harmony Gardens.

The wage increase is an extra cost for Harmony Gardens. In order for them to keep their profit of $72,555 or similar, Harmony Gardens may have to get their customers to pay the extra cost by raising their service price. When I put the extra cost into my Projected Income Statement it showed the original price of $38 was still the best option. The other options reduce the profit due to the lower price charged, - too low to make a profit and customer demand because it is becoming less affordable with higher prices, resulting in less buffer than if kept the same. My original price provides $68,555 profit after this wage increase, meaning there is a $3,555 buffer above the required $65,000 profit which only goes down with the other prices.

Use a model or concept from the list below to help you determine what Harmony Gardens should do regarding their price. You need to consider at least two alternative prices. You will need to use at least one of the following models to support your decision: Break Even Analysis, Projected Income Statement, Supply and Demand.

Harmony Gardens Projected Income Statement for the year ended 31.3.24 Price $38. Hours of landscaping 4,400.			
	$	$	$

Revenue/income			167,200
Less Expenses			
Landscaping costs			
Worker salaries	84,000		
Vehicle expenses	3,960		
Vehicle insurance	1,150		
Advertising	350		
Repairs and maintenance	2,500		
Supplies used	1,760	93,720	
Administration costs			
General business expenses	4,000		
Accounting fees	650	4,650	
Finance costs			
Interest on loan	275	275	
Total expenses			98,645
Projected profit for the year			$68,555

Harmony Gardens
Projected Income Statement for the year ended 31.3.24
Price $40. Hours of landscaping 4,100.

	$	$	$
Revenue/income			164,000
Less Expenses			
Landscaping costs			
Worker salaries	84,000		
Vehicle expenses	3,690		
Vehicle insurance	1,150		
Advertising	350		
Repairs and maintenance	2,500		
Supplies used	1,640	93,330	
Administration costs			
General business expenses	4,000		
Accounting fees	650	4,650	
Finance costs			
Interest on loan	275	275	
Total expenses			98,255
Projected profit for the year			$65,745

Harmony Gardens

Projected Income Statement for the year ended 31.3.24 Price $36. Hours of landscaping 4,550.			
	$	$	$
Revenue/income			163,800
Less Expenses			
Landscaping costs			
Worker salaries	84,000		
Vehicle expenses	4,095		
Vehicle insurance	1,150		
Advertising	350		
Repairs and maintenance	2,500		
Supplies used	1,820	93,915	
Administration costs			
General business expenses	4,000		
Accounting fees	650	4,650	
Finance costs			
Interest on loan	275	275	
Total expenses			98,840
Projected profit for the year			$64,960

Harmony Gardens Projected Income Statement for the year ended 31.3.24 Price $42. Hours of landscaping 3,500.			
	$	$	$
Revenue/income			147,000
Less Expenses			
Landscaping costs			
Worker salaries	84,000		
Vehicle expenses	3,150		
Vehicle insurance	1,150		
Advertising	350		
Repairs and maintenance	2,500		
Supplies used	1,400	92,550	
Administration costs			
General business expenses	4,000		
Accounting fees	650	4,650	
Finance costs			
Interest on loan	275	275	
Total expenses			97,475
Projected profit for the year			$49,525

Explain the options you have considered. You should explain the impact that the different options would have on Harmony Gardens.

I chose the only two prices that still made Harmony Gardens a sustainable profit, $38 and $40.

Leave the price the same at $38.

The original price of $38 is good for the customers of Harmony Gardens as it is still going to be affordable for them as nothing has changed because it is the same price. It has a negative impact for Harmony Gardens because they will lose $4,000 profit with the wage increase. However, they still have a $3,555 buffer above the $65,000 profit target as at this price they will make $68,555 and before the wage increase, they made $72,555. The original price provides the strong buffer stated above which is important to have so they remain sustainable when there are some unexpected extra costs. It also allows for some customers to not be using their service as the number of customers using their gardening service (QD) at that price is just a rough estimate. There is no change for the workers at this price, however it provides greater employment security than the higher price below because there are 300 more hours of work available annually (100 per worker) and $2755 greater profit for the business.

Raise the price to $40

The price of $40, raising it $2 from the original price is bad for the customers as it makes it less affordable to them than $38. However, if they can still afford to pay this gardening service it is still $5 less than the cheapest competitor, Blissful Gardens. It means that the only reason to switch to Blissful Gardens would be if they knew they did a much better job than Harmony Gardens. However, it is unlikely as Harmony Gardens now have one full year's experience and will be continually improving their gardening skills. The rise in price is also negative for Harmony Gardens as they actually end up with $2,755 less profit than at the $38 price. The $40 price provides $65,745 in profit which is only $745 above the profit target, whereas the $38 price provides $68,555 in profit and is $3,555 above the $65,000 profit target. It is also negative for the workers. The workers don’t get more money from this price rise as they are each paid a fixed salary, they will however be less happy with this price because it means that they are more likely to lose their job because of the lack of work or money to the business. All figures above have been shown or calculated with or from the projected income statement. All the reasons above prove why $38 is best as it keeps both the customers, the workers and the business happy.

Identify the price you have chosen to be used by Harmony Gardens after the salary increase. Justify this price. You must include detailed reference to your economic model(s). You must also use detail from the background information, including the pūtake.

I have decided that the best thing for Harmony Gardens would be to keep the original price I recommended of $38 per hour. My projected income statement

shows it still exceeds the profit target of $65,000 by $3,555, making a total profit of $68,555. It requires 4400 hours which falls within the maximum hour range of 4500. A price of $42 per hour or higher doesn't meet the profit target due to it only providing $49,525 or less. As the business passes on the costs the price goes up and there is less customer demand for the service because of affordability. The required hours of 3,500 or less easily falls within the 4,500 relevant range. However, a price of $36 per hour or lower doesn't meet the profit target due to it only providing $64,960 or less. As the price goes down there is less profit because there isn't enough margin between expenses and income. It also requires a minimum of 4,550 or more hours which exceeds the maximum 4,500 hours available from the team. Although a price of $40 per hour provides $65,745 profit and just meets the $65,000 required, it is a small buffer that might not be enough if there were high unexpected costs. Therefore, keeping the price remaining at the original $38 meets the needs of all stakeholders and supports the pūtake of providing a gardening service at a fair and affordable price for their clients, while remaining economically sustainable.

Discuss the consequences of this price on both Harmony Gardens and its stakeholders (customers, workers and business/ownership).

Harmony Gardens – Keeping the price the same at $38 per hour means the business will have a profit of $68,555. It provides a strong buffer above the profit target of $65,000 and greater business security with a sufficient margin for larger unexpected expenses, plus greater opportunity to expand or improve the business.

Customers – Retaining the original price of $38 per hour helps increase/keep customer loyalty and remains well below all other local competitors' prices. The customers are happy because it is still cheap and affordable for them.

Workers – The same price per hour of $38 for gardening services means the salary and hours worked remains the same. Having job security with this price will have a positive impact on the workers. Whereas, at $40 there are less hours available and potential loss of job security due to reduced business income. The price of $36 per hour or lower doesn't meet the profit target and exceeds the working hours available by the team.

Grade: Excellence
For Excellence, the student needs to evaluate price determination for an organisation. This involves: • justifying the determined price supported by financial or non-financial information, and a concept or model • discussing possible consequences of the determined price with reference to impacts on the organisation and its stakeholders. This student has responded to the external factor of introducing new technology (a machine that could speed the process of opening mussels) by explaining the impact on production and productivity. The market model was used to demonstrate a shift of supply to the right and the impacts on price, quantity, and equilibrium. They considered two pricing options, i.e. changing or retaining the original price of $10 or reducing the price to $9. The justification of the lower pricing option of $9 included reasons why this is the better option, i.e. there is no wastage because the surplus is cleared and revenue and profits increase. The demand and supply model was used in explanations by referring to specific points (price, quantity, surplus, and equilibrium) and calculations of changes in revenue and profit. The student identified potential consequences on the business: the ability to increase revenue which means she could possibly expand by opening another food truck. She could then employ another staff member and further increase profit and grow the business. They also included a negative consequence of feeling burnt out and tired. The impact of a price decrease on customers and on competitors was explained. The latter could go into a price war with the business which could have further negative impacts. Consequences on employees and the government were also explained, but these focused more on Aroha's ability to expand rather than being focused on the lower price of $9.

Excellence

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Kai on Wheels – a case study

Aroha is a talented and innovative chef who wants to run her own business. Previously, she worked in the hotel and catering industry and now wants to do something different. She is going to launch Kai on Wheels, a food truck business, at the local night market in [redacted]. There is currently no one selling Māori food such as toroi (fresh mussels with pūhā juice).

Aroha is interested to find out the price of toroi as it is unique in the market. She is investigating other things such as bamboo packaging, bamboo plates, bamboo spoons and knives, sign board advertising, technology changes in the food industry, future prices of other would-be competitors, and other Māori food that could be complemented with toroi. Aroha will also be hiring two part-time employees to help run the business.

The average price to produce each toroi is $3.00

The pūtake of Kai on Wheels aims to provide fresh food from the sea, strive to be socially and environmentally responsible, care about the customers and suppliers, build tikanga (Māori customary practices), reduce landfill waste, and make a profit.

Toroi

Whitebait fritters

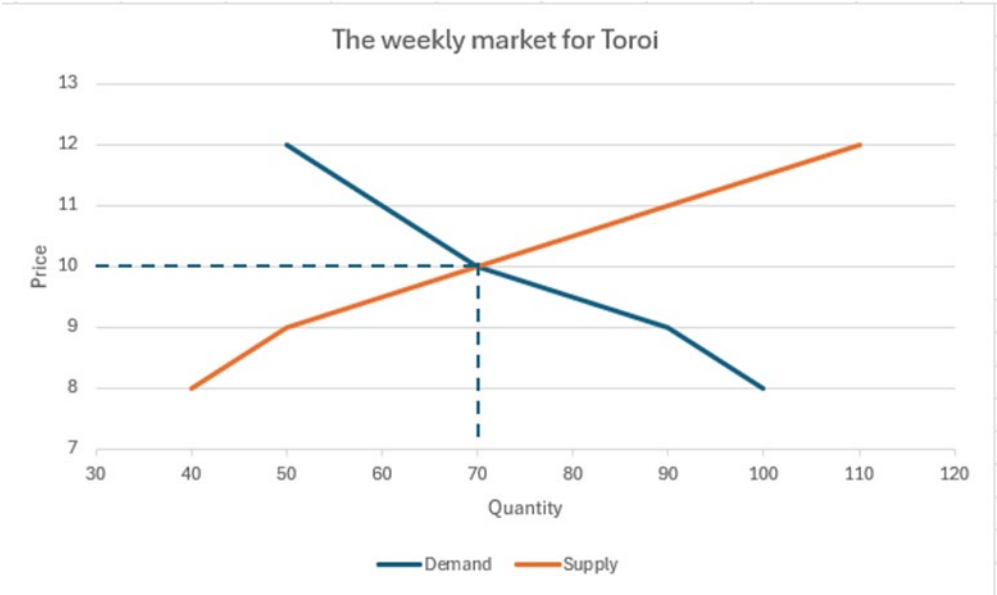
Pipis

Following Aroha's research, she has gathered the data below in the table.

The weekly market for Toroi (fresh mussels with puha juice)		
Price ($)	Market Demand	Market Supply
8	100	40
9	90	50
10	70	70
11	60	90
12	50	110

Part A: Questions 1-3

1. Using the table above, construct the market demand and supply curves on the graph below. Label the equilibrium price (Pe) and the equilibrium quantity (Qe).



2. Determine the price that Aroha should set for her Toroi (fresh mussels with pūhā juice). In your answer you should:
   - Describe the concepts of market demand and market supply
   - Describe the concept of market equilibrium
   - Refer to the model you have constructed above

The price that Aroha should set for her toroi is $10. The market demand at $10 is 70 toroi and the amount supplied is also 70 toroi. This is where the quantity supplied and demanded meet, and it is called the equilibrium point. The market supply is the total supply of all the producers in the market. The market demand is the demand of all the consumers in the market. If Aroha set the price at $11 the amount supplied would be 90 and the amount demanded would be 60 toroi therefore leading to a surplus. If you set the price at $9 the amount supplied would be 50 and the amount demanded would be 90 leading to a shortage. Therefore, the price should be $10 so the quantity supplied and the quantity demanded remain constant and meet at the equilibrium point. The law of demand states that as the price increases the quantity decreases, vice versa ceteris paribus. This links into the graph as when the price increases from $10 the quantity decreases and when the price decreases the quantity increases and when the price and quantity remain constant it reaches the equilibrium point.

3. Explain the financial or non-financial information that Kai on Wheels might have available to determine the price of toroi.

FINANCIAL INFORMATION
Financial information is related to the cost of production the sales of the product, the revenue, the price and the profit of the business.

The revenue is the sales that means to calculate it we multiply the price (P) by the quantity (Q). Price x quantity sold = revenue. At $10 the business is making 70 sales. This means $10x70 = $700 revenue.
The cost of production is the average cost multiplied by the quantity sold. So $3x70 = $210 for cost of production.
Since Aroha's business is selling toroi at $10 and supplying 70 per week, the cost of production is $210, and the revenue is $700 per week.
To find out the profit we subtract the cost of production from the revenue. So, the profit is $700 (revenue) - $210 (cost of production) = $490 profit.
If the business was to sell toroi at $9 the revenue would be $450, and the cost of production would be $150 so the profit would be $450-$150 - $300 profit.
When the business sells at $10, they are making a $490 profit whereas at $9 they only make $300 profit. So, selling at $10 is more efficient to the business as it leads to more profit.
I feel that the business should not sell at $9 but sell at $10. I think this because at $9 there is a shortage (AD-AS) of 40 (90-50). When the business sells at $10, they make much more profit and will have no shortage or surplus as they are at the market equilibrium. It will be good for her business in the long run as they are operating at a level were the QD=QS.

NON-FINANCIAL INFORMATION
For the business to run smoothly they have to have a good quality of product. A business such as Aroha's selling toroi must be good quality because customers want to have safe and edible food, so they don't get sick and get food poisoning. Also, a good quality product will fetch a good price.
Another point is the advertising. Aroha must network properly to not mislead people to not falsely advertise. If she does falsely advertise her toroi she can run into problems with customers and she may lose them.
The pūtake of Aroha's business is to save the environment. She does this by using bamboo packaging, bamboo plates and bamboo cutlery. This means that they can be disposed of naturally and will not harm the environment like plastic does. This will attract customers as they see that she is making a difference for the benefit of the environment. Her pūtake is to also provide food from the sea while reducing waste and having good relationships with customers and suppliers. She also wants to build up tikanga which is values, rules and how to wants to do business. She wants to stick by Māori customary practices.
Tastes and preferences are a big factor as she will want to adapt her toroi to the preference of the customers to draw them in to lead to more of an audience so that customers don't go elsewhere.
She must also have good relationships with the people involved such as customers and suppliers. If she has a good relationship with her supplier for the bamboo products she can be prioritised and get her items faster leading to a smoother process.

Part B: Questions 4-6

Internal factor

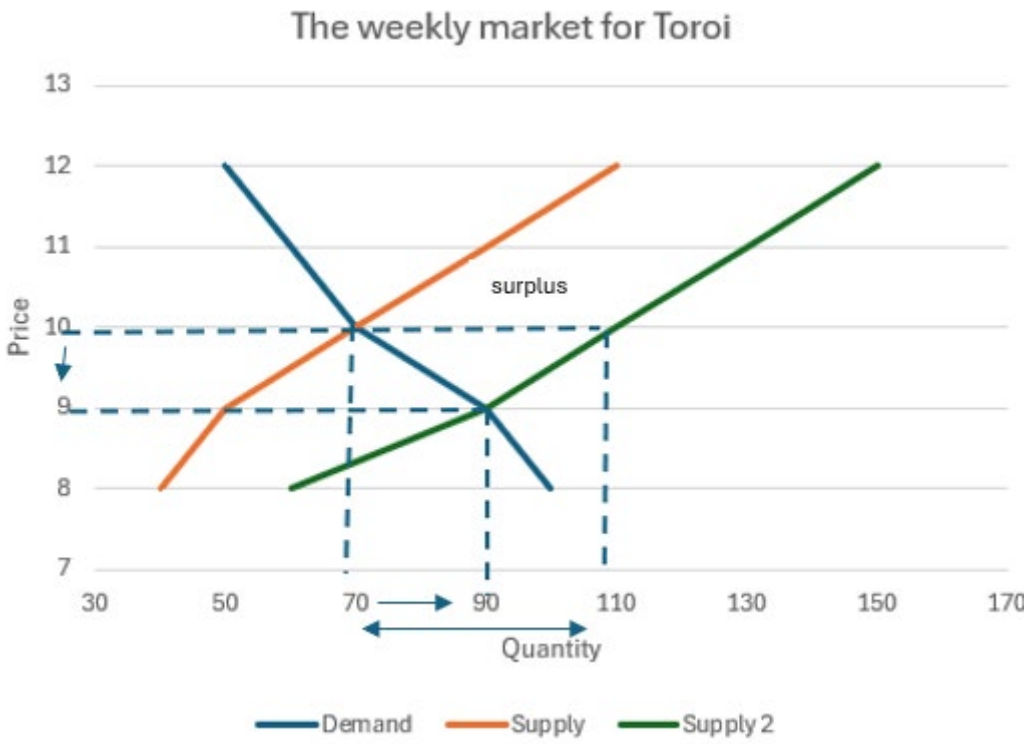
Aroha is looking to upgrade her machinery so she can make her toroi faster. Currently, the process is labour-intensive. Aroha opens the fresh mussels by hand and uses lots of kitchen utensils, pots and pans.

The new machinery will be more capital-intensive. The opening of the fresh mussels will be done an automated machine allowing Aroha to increase the production process.

Following the upgraded technology, Market Supply has changed

The weekly market for toroi (fresh mussels with pūhā juice)			
Price ($)	Market Demand	Market Supply 1 (before)	Market Supply 2 (after)
8	100	40	60
9	90	50	90
10	70	70	110
11	60	90	130
12	50	110	150

4. Using the table above, construct the market demand and both market supply curves (before and after technology change) on the graph below.



5. Explain how the price of toroi could be affected by Aroha introducing the new machine (internal factor) to quicken the process of opening the fresh mussels through an automated machine and the impact it will have on her production costs. Refer to the supply and demand model you have created above.

With an increase in new technology Kai on Wheels will increase their production process and overall productivity. Technology is the use of machines in the production process. When Aroha uses this new technology, she will be able to produce more at a lower cost while speeding up her overall process and also increasing her output from S to S2.
The revenue at $10 is $700 ($10 x 70) and at $9 it is $810 ($9 x 90). The cost at $10 is $210 (70 x $3) and at $9 it is $270 (90 x $3). The profit at $10 is $490 (700-210) and at $9 it is $540 (810-270).
So overall weekly she will be operating at $50 per night profit. This is an increase which brings Aroha more income.
Aroha has got the option to bring her price down from (P1) $10 to (P2) $9 as shown in the model. If Aroha decides to sell the toroi at $10 (P1) then the quantity supplied is 110 (S2) and the quantity demanded is 70 toroi, meaning there will be a surplus of 40 toroi. While using the new technology if she comes to a decision to bring the price down to $9 (P2) the quantity demanded will be 90 toroi and the quantity supplied will also be 90 toroi reaching the market equilibrium where the quantity supplied and demanded meet. This will increase her revenue from $700 to $810 (+$110).
The technology will increase her production process significantly. This will increase her production of toroi. This results in an increase from S to S2. This will help her to be more efficient as it will increase her output overall.

6. Explain the options for changing or not changing the price of toroi using financial and non-financial information.

The options that Aroha has for her toroi is to change the price to $9 or to keep the price at $10. If she changes the price to $9 she will be operating at more of a profit than if she stayed at $10. Her revenue at $9 is $810 but at $10 it is $700. So Aroha makes $110 more in revenue if she sells at $9. Her costs at $10 is $210 and at $9 is $270 but since she is making a significantly higher amount of revenue it is alright to have higher costs. Her profit at $10 is $490 and at $9 it is $540 which is a higher amount leading to a more profitable business. Aroha may want to change the price of her toroi to bring in more customers. If customers see the lower price, they may be more intrigued to buy it knowing its cheaper. If it is $10 customers will not want to buy it which will reduce interest and not be good for her business in the future.
With the new technology if she sells at $10, she will have a surplus of toroi as shown in the model with the double headed arrow. This will lead to wastage and then she will have to pay extra to dispose of the wastage which will lead to more costs. Aroha's pūtake is to reduce landfill waste and by selling at $9 she will have no surplus meaning no extra wastage. If Aroha wants to run a smooth business, she must have good relationships with the people around her. She needs to have a good relationship with her supplier so that she can be prioritised and get all her bamboo plates, spoons and cutlery on time. If she doesn't have those items on time, she will not be able to sell the toroi. She must have a good relationship with customers as she needs to be able to sell her products to them. She also has to have a good relationship with employees as they are the ones that are helping her operate her business. If they work well, she can leave them to run the food truck so she can spend time elsewhere and be efficient.
Aroha has to stick to the pūtake of her business which is to provide fresh food from the sea, strive to be socially and environmentally responsible, care about the customer and suppliers, build tikanga, reduce landfill waste, and make a profit. She can achieve this by building good relationships with all the people around her by using her bamboo products and selling at $9 to make more of a profit. To stick by her tikanga she must run her business by following Māori rites and values and running her business ethically by showing dignity, integrity and fairness to all those involved.

Part C: Questions 7-8

7. Justify the determined price of toroi by Kai on Wheels through financial and non-financial information, and a supply and demand model.

The finalised price of toroi should be $9. At $9 the cost of toroi is $270 ($90 x 3 = $270), the revenue is $810 ($90 x 9), and the profit is $540 ($810-$270).
At $9 Kai on Wheels is making more revenue and profit and that will benefit them in the long run. By making an extra $50 per week it will boost Aroha's income which she could put into a savings account which can be used for future upgrades.
Totalling all the financial information I think Aroha should make the final price of toroi $9 as she will have no shortage or surplus as supply and demand are constant.

Aroha should lower her price as it would follow her pūtake of being socially and environmentally friendly and making a profit. She would be able to make good relationships with more people as the price goes down. She would have no wastage which would be saving the environment. She uses bamboo plates and cutlery which decompose easily, and she will be making more of a profit at the lower price.
She will be creating no extra leftovers as the supply and the demand meet at the market equilibrium as shown in the model. This would mean the environment is kept safe. She would be following Māori customary rights as she collects mussels straight from the sea. This is how her ancestors used to collect mussels and that is building good tikanga.
After taking into account the financial, non-financial and the supply and demand model, I personally think Aroha should set her price at $9 to get the best results out of her business Kai on Wheels in the long run. It will be good in the long run as they are operating when QD=QS.

8. Discuss the consequences of the determined price with reference to impacts on:
   (c) Aroha's Kai on Wheels business
   (c) An internal stakeholder (employees, owners or managers)
   (c) An external stakeholder (legislation and regulation by the local and central government, competition or suppliers)

AROHA'S BUSINESS
As Aroha lowers her price to the determined price of $9 she will see an increase in customers and revenue. This increase could lead to her opening another Kai on Wheels food truck. She could open her new truck at a night market like [redacted] This would double her revenue. With this added truck she can then expand on her employees. She will be able to also increase her networking as she will have double the customers which means word will spread much faster. She can build her empire of trucks and then even lease a restaurant and display her talents there. Having a new location will be very beneficial to her revenue and will help her be able to upgrade her technology faster.
A negative could be that she gets burnt out and feels tired. Having two trucks would mean double the production which can take a toll on her. As she can't be in two locations at once she would have to pay employees more and even hire a manager to watch over one location. This can lead to increase in costs. Opening a new truck could still be beneficial to her in the long run with increased revenue and marketing.

INTERNAL STAKEHOLDER
An internal stakeholder is an individual or group involved in the business. They are vested in the business. As the price of $9 caused revenue to go up Aroha may look to increase the hours and wages of her two employees. She may do this to keep them motivated and working to full potential. This can be good for Aroha as she can step back a bit and let the employees run the truck.
A negative effect could be if a competitor opens a truck at the [redacted] Night Market. This could mean that they go into a price war which will then led to less revenue and profits.

This would flow on to Aroha making less revenue in the future which will only lead to problems. She may not be able to upgrade her technology and increase the hours and wages of her employees. It is so crucial that no competitors arise at the [redacted] Night Market for Aroha and her business.

EXTERNAL STAKEHOLDER

As Aroha determines her price at $9 the government will receive more taxes. The government is vested in Kai on Wheels as they receive taxes from the business. The central government receives indirect tax which is GST. They receive 15% of every sale so as Aroha increases her sales the government receives more GST. The government receives these taxes and uses then for the benefit of our country. They can provide budgets and tax relief to those who are struggling in our community. The local government collects city rates. They then use these to upgrade public areas. They can build new roads to speed up traffic. They can build streetlights for better visibility and extra rubbish bins to keep the city clean. They can add these features to the [redacted] Night Market which can keep the event flowing and will make it better. The government can upgrade leisure centres and public parks which will benefit the public and that's what the government wants.

A negative could be that the council increases rates for parking and rubbish bins. As Aroha has a mobile vehicle she has to pay for parking. If she has to pay more for parking it will cut into her revenue meaning she will make less. These added costs could impact her business, and she could make less revenue in the future. So, as she makes more revenue from the increase in sales she will be paying more to the government in GST per sale of 15%. She will also be paying more in city rates if the local government decides to increase it, which leads to extra costs for Aroha and Kai on Wheels.