

Igloo Ices - Profit Level (Solution)

Marsha Mellow runs Igloo Ices, a sole trader business that sells ice cream. She currently owns one ice cream van, but dreams of eventually owning a chain of ice cream shops. Marsha finds the money-side of her business confusing, and feels that she needs to understand it better so asks for your help.



Marsha would like to be able to predict how much profit she might make next year. She has the relevant financial information, but is not sure what calculations she needs to complete. Complete the tasks below using the information Marsha has provided to help her.

Task 1

Complete the table below to calculate potential profit depending on the number of ice creams that Marsha might sell.

Start by writing down the formula for profit:

$$\text{Profit} = \underline{\text{Total Revenue}} - \underline{\text{Total Costs}}$$

Use this formula to complete the table below:

Ice Creams Produced	0	500	1,000	1,500	2,000	2,500	3,000
Fixed Costs (£)	2,900	2,900	2,900	2,900	2,900	2,900	2,900
Variable Costs (£)	0	25	50	75	100	125	150
Total Revenue	0	750	1,500	2,250	3,000	3,750	4,500
Total Costs (£)	2,900	2,925	2,950	2,975	3,000	3,025	3,050
Profit (£)	-2,900	-2,175	-1,450	-725	0	725	1,450

Task 2

Marsha is pleased that it looks as if she can make a profit, and is already thinking about what she might treat herself to with the profit she might make.

Can you explain to Marsha why she may not be able to “spend” this profit, by outlining the difference between “profit” and “cash”?

Many profitable businesses fail as a result of running out of cash since profit is not the same as cash. This is because, on paper, they have sold products for more than they have cost to make, but in reality they may have had to pay their suppliers before they have been paid by their customers.

Profit is the difference between the amount earned and the amount spent by a business irrespective of whether the money has changed hands. Cash, on the other hand, is money that a business has immediate access to, and can make use of.

Marsha might make £1,450 profit if she sells 3,000 ice creams, but some of this could be in the form of stock, e.g. cones or soft ice cream mix if she has spent money on them and has more at the end of the year than she did at the start of the year. In addition, if she has provided services to businesses, (e.g. attended open days) she may not be paid immediately, and may have to wait for her money, even though on paper she has earned it. This means that the profit she has made may not be available in cash to spend

Explain why cash flow is particularly important for a business such as Igloo Ices

Ice cream is a seasonal product, and as such Marsha would expect to sell more in the summer months, with perhaps little money coming in during the winter months.

This means that Marsha will need to manage her cash flow very carefully to ensure that Igloo Ices has enough cash to pay any bills that are due in the winter months.

Since her business usually involves selling to customers from her ice cream van, she is likely to get paid immediately in cash when a sale is made. If few sales are made in the winter months, then the money she makes in the summer will have to be enough to see her through the winter months.

Task 3

Marsha is very grateful for all of your work, but is a little confused. She wonders if she has made a mistake, so asks if you can calculate the profit per ice cream if she sells:

a) 2,500 ice creams:	£0.24	Profit per ice cream
b) 3,000 ice creams:	£ 0.43	Profit per ice cream

Can you explain to Marsha, why these two figures are different?

Each ice cream generates £1.50 in revenue, and incurs £0.05 in variable costs. However, the fixed costs don't change. Therefore, as sales increase the fixed costs are spread across a higher number of ice creams, so each one has to make a smaller contribution towards fixed costs, and so makes more profit.

Task 4

Marsha is still a little confused. Use the diagrams below to illustrate the difference in unit costs when she is selling 2,500 ice creams compared to 3,000 ice creams - an example of selling 2,750 ice creams has been done for you:

