

Profit or Loss?

Key financial ideas

- Profit (or loss) is calculated by deducting costs from revenue.
- Financial information helps to:
 - estimate a financial position in the future
 - make better financial decisions for next time.

You need: a calculator, a spreadsheet

ACTIVITY ONE

Making money from calf raising depends on keeping the costs down and selling the calves for the highest price you can. Jessica knows that she will need to feed the calves for 14–15 weeks. You will need the information below to work out her estimated costs.

- **Purchase price**

\$110 average cost per calf, including stock agent's fee of \$10 per calf

- **Transport to the farm**

\$11.50 per calf

- **Milk powder**

Each calf will consume 1.2 x 20 kilogram bags. Each bag costs \$72.00.

- **Meal**

Each calf will consume 3 x 25 kilogram bags. Meal costs \$780.00 per tonne.

- **Hay**

1 bale of hay will feed 20 calves for 3–4 days. Each bale costs \$5.00. The calves will need hay for about 7 weeks before they are sold.

- **Death**

3 percent of calves die because their stomachs are not able to digest the milk or for other reasons.

- **Medication**

Allow \$5.00 for every calf. This also covers treating the calves that get scours, nasal infections, or pneumonia.

- **Agent's fees**

Jim Hogan will charge Jessica 5 percent of the sale price per head for arranging the sale of her calves.



1. Set up a table to calculate the total cost for Jessica of raising her 50 calves to date. The easiest way is to use a computer spreadsheet and enter formulae so that you can easily change the number of calves and costs.

	A	B	C	D
1	Item	Cost per calf	Quantity	Total cost
2	Purchase (average cost)	\$110.00	50	\$5,500.00
3	Transport to farm	\$11.50	50	\$575.00
4	Milk powder	\$86.40	50	

2. a. Jim Hogan predicts that Jessica will get these prices for her calves when she sells them:
 - \$330 per Friesian–Jersey
 - \$380 per Friesian
 - \$430 per Hereford–Friesian.

Three percent of Jessica’s calves died. Based on your answers for question 2d in *Beefing up Business* and assuming that the calves that died were Friesian–Jersey, how much can Jessica expect to receive in total for her remaining calves?

- b. Don’t forget that Jim charges 5 percent of the sale price for his fee. How much will that be?
3. Use your table or spreadsheet from question 1 to predict Jessica’s profit from calf raising this year. How much money might she make on average for each live calf? (Note: Remember that the costs are shared over all breeds.)
4. Could Jessica improve her profit by:
 - buying only one breed of calf?
 - buying more calves or buying fewer calves?
 - cutting her costs in some way?

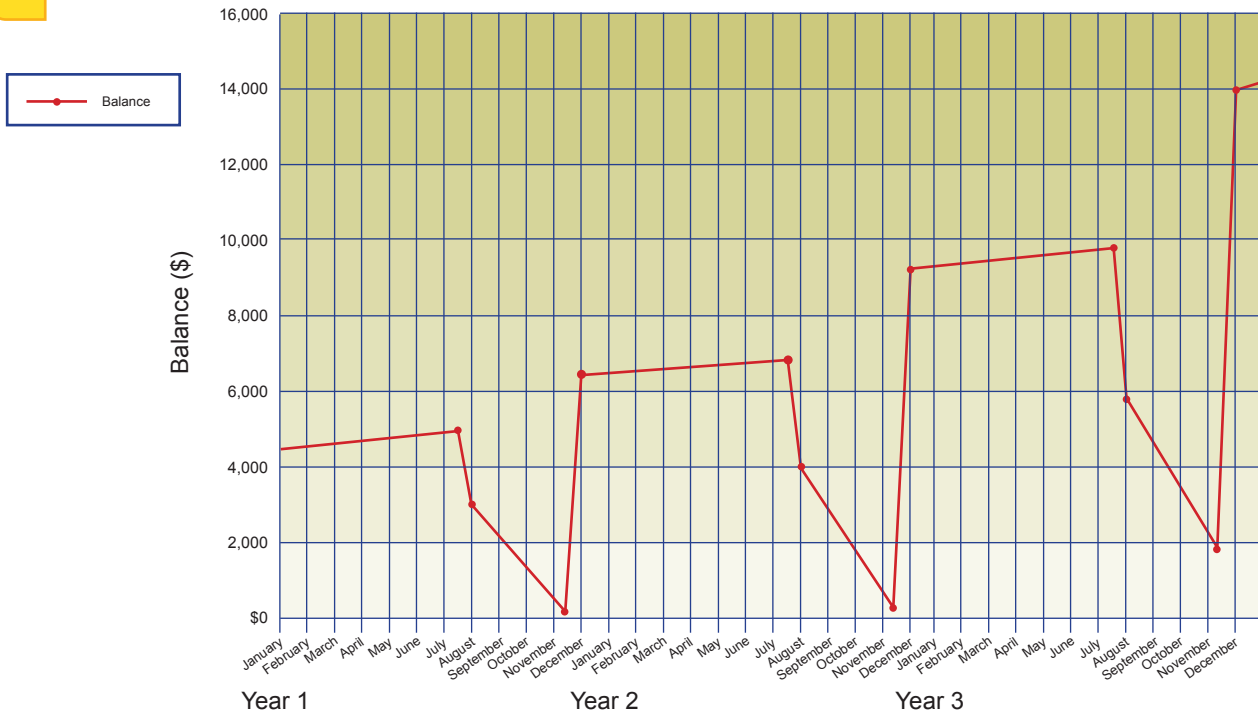
Explain your answers.



ACTIVITY TWO

Jessica banks her profit from her calf rearing. Her account earns interest each month, based on the amount of money that is in it at the time. This graph shows her monthly account balances for the past 3 years.

Balance in Jessica's Account



1. Write a few sentences that explain the trends and patterns in Jessica's graph.

2. Use a spreadsheet to predict what her graph for this year (year 4) will look like.

Assume the following information:

- Jessica starts year 4 with \$14,187.10 in her account.
- The interest rate on her account is a flat rate of 8 percent per annum, paid at the beginning of each following month (so the February total includes January's interest). $8 \text{ percent} \div 12 = 0.6\bar{6} \text{ percent}$ interest per month.
- Her costs and income are what you calculated in **Activity One**, questions 1 and 2.

	A	B
1	Jan Yr 4	\$14,187.10
2	Feb Yr 4	\$14,281.68
3	Mar Yr 4	\$14,376.89



3. How much would you advise Jessica to spend on calves in the next 4 years, leading up to university? Explain your advice. (Use \$110 as your average purchase cost. Note that the largest number of calves she can feed is 300.)

Reflective question

- Do you think that the time Jessica uses to run her business is worthwhile? Why or why not?