**Managing debt: Is credit the right way to go?**

#  ➔ Is borrowing money a wise decision?

➔ How does debt shape your financial identity?

➔ Are credits cards good or bad?

## **Scenario**

Jill is year 12 student at high school. At the local university open night, she was asked if she wanted to sign up for credit card with one of the national banks. She applied for a low interest card as she thought it was good way to start building her credit rating. When Jill received the card, she was careful about not using it for everyday purchases. However near the end of her school year, she used her card and bought school clothing, food and school events. A month later, Jill received her statement and she was not prepared for the $535.67 she owed. Jill read the statement and saw that she only had to pay $17.50 as a minimum payment. She was thrilled at first but then wondered if that was the best option to take.

## **Exploring Debt - Brainstorm**

Using the resources below explore the ideas around credit cards and debt. You could create a powerpoint, a brainstorm, or document to express your ideas.

### Resources from SORTED

[Sorted Debt Calculator](https://sorted.org.nz/tools/debt-calculator)

[Managing Debt - What to know before borrowing money](https://sorted.org.nz/guides/before-borrowing) [Compound Interest](https://sorted.org.nz/guides/compound-interest-friend-or-foe)

**Things for you to think about:**

1. What do you know about credit cards?
2. What do you want to know about credit cards?
3. What are you wondering about debt?
4. What is debt?
5. What questions do you have?
6. What links can you see to maths?
7. What links can you see to your financial identity and debt?

## **Reflection**

1. What information helps me answer my questions?
2. Do I need to find out more? What am I missing?
3. What are my questions now?
4. How can I use maths to help me answer my questions?

Mathematical Links - Number and Algebra

To confidently understand how interest works you will need your maths knowledge and skills. When you use credit cards you are charged interest from the bank or the lender.

There are two typical types of interest formulas – **compound** and **simple**.

➔ A compound interest formula calculates the amount owing taking into account the amount borrowed, principal interest, **and** time. Credit cards use compound interest.

➔ A simple Interest formula calculates the amount owing taking into account the amount borrowed and principal interest.

### **Show your working and give your answer to the interest gained (in proper units):**

|  |  |  |
| --- | --- | --- |
| Question | Simple Interest I = PRTInterest = Principal x Rate x Time | Compound Interest |
| You are $300 in debt. The interest rate is 6% p.a. and you plan to pay it off within 2 years. |  |  |
| You are $1278 dollars in debt. The interest rate is 29.99% p.a and you plan to pay it off within 2 years. |  |  |
| You are $6000 dollars in debt. The interest rate is 14.5% p.a and you plan to pay off within 5 years. |  |  |

|  |  |  |
| --- | --- | --- |
| Question | Simple Interest I = PRTInterest = Principal x Rate x Time | Compound Interest |
| You borrowed $X. The interest rate is 9% p.a. and you plan to pay it off within 2 years. The total sum you paid was $567. What was your original borrowed amount? |  |  |
| You borrowed $X. The interest rate is 22.7% p.a. and you plan to pay it off within 4 years. The total sum you paid was $1259. What was your original borrowed amount? |  |  |
| You borrowed $X. The interest rate is 32.99% p.a. and you plan to pay it off within 6 months. The total sum you paid was $898. What was your original borrowed amount? |  |  |

**Finding Out - focus on the consequences**

Looking back at the scenario - investigate the different choices Jill could use to pay off her debt. You will need to show Jill some different options around paying off her credit card.

Use the [SORTED Debt Calculator](https://sorted.org.nz/tools/debt-calculator) to fill in the information in the template below. This will help you communicate options to Jill.

|  |
| --- |
| **Credit Card Information**Credit Card Amount: Annual Interest Rate (%): |
|  | **Weekly** | **Bi-weekly** | **Monthly** |
| Amount Owed: |  |  |  |
| Repayment Amount: |  |  |  |
|  |
| Total Repayment |  |  |  |
| Amount of Interest Paid |  |  |  |
| Length of Repayment |  |  |  |

##  **Questions**

1. What is similar and what is different between the columns (weekly, bi-weekly and monthly)?
2. What would happen if you changed the repayment amount to a **higher** or **lower** amount?

In the box below - communicate to Jill what you have learned and what advice you would give to tackle her debt.

|  |
| --- |
|  |

##  **Reflection**

Using the [mathematics rubric](https://sortedinschools.org.nz/sorted-resources/learning-areas-yrs-9-10/maths/assessment/) answer the questions below:

I think my work at the moment is at level for financial capability and I think my work at the moment is at level for mathematics.

This is because….

The peer I have chosen to critique my work is

They critiqued my work and have judged it to be at level

The reasons they gave me for their decision are

Therefore, my next steps to refine my work and make it better are...