

Spreadsheet Exercise

Save changes as instructed.

Student Name:

This exercise is taken from a sample Common Assessment Task for Spreadsheets, 1998 by David Whyte.

INTEREST PAYMENTS ON BORROWED MONEY

Sione wishes to borrow money from a bank to buy a car. To do this, he needs to borrow \$5,000.00. Sione has visited three banks and they have given him the following information.

Amount to Borrow:
\$5,000.00

	Bank One	Bank Two	Bank Three
Interest Rate	9.75%	9.00%	8.50%

Activity	Criteria	Mark
SECTION 1		
1. Create a spreadsheet with the information that Sione has found out. Make sure you include all the labels and numbers	5.4.1	2
<i>Sione needs to know how much interest he will pay at the end of one year. This is found using the relation:-</i> $\text{Interest Accrued} = \text{Amount Borrowed} \times \text{Interest Rate}$		
2. Insert a formula in the column under Bank One, that will calculate the interest accrued.	5.3.3	2
• It must include an absolute reference to the \$5,000.00 entered in your spreadsheet		1
3. Copy the formula to the next 2 cells to calculate the interest accrued for the other two banks.	5.3.4	1
4. Enter a label for the row with the interest accrued.	5.3.1	1
5. Format the numbers in the spreadsheet as shown below:	5.4.4	
• Percent for the Interest Rate		1
• Comma Style with 2 decimal places for the calculated Interest Accrued.		1
• Currency with 2 decimal places for the \$5,000.00 loan amount		1
SECTION 2		
6. Sione intends to keep the money for one year and then pay it back as one payment. Sione needs to know the TOTAL amount he must pay at the end of the year to clear the debt. The TOTAL amount to be paid back is the Accrued Interest plus the Borrowed Money.	5.3.3	
• Label the next blank row for showing the TOTAL amount to be paid back.		1
• Enter the formula that calculates the TOTAL amount for each bank. <i>It must include an absolute reference to the \$5,000.00 in your spreadsheet</i>		3

Activity	Criteria	Mark
7. Sione wants to know if he can afford the loan. Sione knows he can save \$105.00 a week, but no more . <ul style="list-style-type: none"> • Leave a blank row after the TOTALs and Label the next row "Needed Savings". • In this row calculate what Sione needs to save every week to pay off the loan as one payment at the end of the year. (Use 52 weeks in a year for these calculations) 	5.4.3	1 3
8. Can Sione afford the Loan? Write your response below, referring in your answer to all three banks	5.4.3	3

9. Save the spreadsheet file onto your examination disk as "*Loans and Payments*" 1

SECTION 3

10. Sione did not realise, know, that the bank charges \$25.00 for an application fee for a loan. This means Sione must borrow \$5025.00. <ul style="list-style-type: none"> • Make the appropriate change to your spreadsheet. 	5.4.5	2
11. Save the spreadsheet as a different file, use the file name " <i>Loans Bigger</i> "		1
12. Can Sione afford the Loan? Write your response below, referring in your answer to all three banks	5.4.3	3

SECTION 4

13. If interest rates increase by 0.25% (a quarter of a percent) what happens to the amount Sione must save each week to pay off the loan? <ul style="list-style-type: none"> • Do a suitable "<i>what if</i>" on your spreadsheet by making the changes to the spreadsheet that reflects the change in rate described above.. 	5.4.6	3
14. Save the changes to a file called " <i>Loans Interest</i> "		1

Do not make markings below. For completion by course teacher.

Sub-total / 32

Sources and References:

David Whyte, Spreadsheet Common Assessment Task 1998

<http://www.tongatapu.net.to/compstud/> - Computer Studies Course Notes

<http://www.tongatapu.net.to> - **Tonga** on the **'NET**

<http://www.tongatapu.net.to> is available on all networked computers at Queen Salote College.

Queen Salote's SchoolNET Website does not require Internet access as it is not connected to the world wide Internet but uses the same technology within Queen Salote College and participating schools.

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