SUBJECT and GRADE	Mathematical Literacy Grade 10
TERM 4	*Week 1*
TOPIC	Banking, loans & investments
AIMS OF LESSON	You need to able to do the following: **1. Investigate the following bank accounts:** • Savings • Cheque / current • Fixed deposit • Credit account (credit card) • Debit account (debit card) **2. Interpret banking documents (like bank statement and fee brochures) by understanding and knowing how to calculate the following:** • opening and closing balance • debit • credit • stop order • Bank charge or transaction fee • debit order • ATM • electronic transfer • payment • interest • credit rates; • debit rates • branch • deposit • withdrawal **3. Determine bank charges for different types of accounts using given fee tables and formulae.** (we will look at this in week 2) **4. Draw graphs from given bank charge formulae to represent bank charges for different transaction amounts on different types of accounts.** (we will look at this in week 2)

RESOURCES	***Paper based resources***	***Digital resources***
	In your textbook look for the topic BANKING / LOANS / INVESTMENTS under the FINANCE heading. This should include information, definitions examples and calculations on banking/loans/investments.	• www.siyavula.com (Chapter 11) • https://viaafrika.com/wp-content/uploads/2019/07/Maths-Lit-G10-studyguide.pdf (Chapter 3 Section 5) • https://businesstech.co.za/news/banking/358795/2020-banking-fees-compared-capitec-vs-absa-vs-standard-bank-vs-nedbank-vs-fnb/ (comparison of banking fee structures in South Africa)

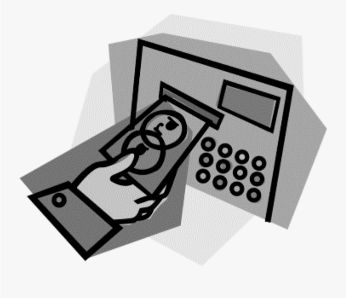
INTRODUCTION

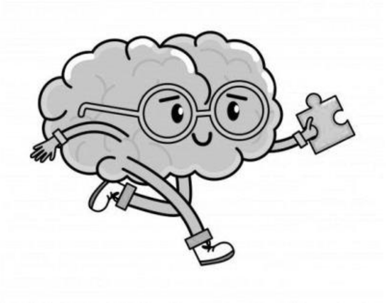
- *We hear and see adverts of different banks on a daily basis.*
- *We also see ATM's and bank branches a lot in malls, and other places.*
- *Most South Africans have at least one type of Bank account at a specific bank that they use to transact with.*
- *In grade 10 the examples we discussed will be limited to household and personal finance.*
- *We need to make sure that we understand banking, so that we can make sense of statements that we receive as well as be able to perform calculations to find out which bank offers the best fee structure for an individual or company.*

CONCEPTS AND SKILLS

1. We will start by investigating the different types of bank accounts:

Type of Account:	**Description:**
Savings account	A bank account that earns interest. You can use a savings account for short – term savings.
Cheque / Current account	A bank account that is used to deposit and withdraw money by visiting the bank branch, using an ATM or Internet banking or by writing a cheque. These are usually available to people who earn a regular income.
Fixed deposit account	This account is aimed at those who have a lump sum they want to invest over a fixed period of time (i.e. a medium or long term saving). Interest is also earned on the investment.
Credit account (credit card)	An account either with a store or bank, that allows the account holder to purchase items now and pay for them later.
Debit account (debit card)	Debit cards can be used to pay for purchases. When it's swiped, money is deducted from the account. Credit is not available on this account.





2. Now we need to look at what we need to be able to define, identify and calculate to Interpret banking documents:

Important term:	**Definition:**
opening and closing balance	The amount of money in the account at the beginning and the end of the period.
debit	Amount of money paid out of an account.
credit	Amount of money deposited into an account
stop order	A stop order is an instruction that you issue to your bank to make a series of future dated recurring payments
Bank charge or transaction fee	This covers all charges and fees made by a bank to their customers for services & transactions.
debit order	An instruction that you provide to a third party to make a series of recurring payments.
ATM	Abbreviation for automatic teller machine. You can do most transactions here without having to enter the branch.
electronic transfer	Electronic funds transfer (EFT) is the electronic transfer of money from one bank account to another, either within a single financial institution or across multiple institutions, via computer-based systems, without the direct intervention of bank staff.
payment	This can either mean you are paying someone for goods or services, or it could also mean you are receiving a payment for goods or services delivered by you.
interest	The amount of money that you are charged (by the lender of money, e.g. the bank) for borrowing an amount of money, over a period of time.
credit rates	This is the interest rate that can be earned on any credit balance in a bank account. The rate will differ according to the type of account as well as the balance of the account.
debit rates	This is the interest rate that can be earned on any debit balance in a bank account, especially a credit card. The rate will differ according to the type of account as well as the balance of the account.
branch	It is a location where the bank offers a wide array of face-to-face and automated services to its customers.
deposit	To place money into an account
withdrawal	to take money out of an account that belongs to you.

3. Examples of Banking Documents:

Bank Statements:

A bank statement is usually sent to the account holder monthly. Bank statements show the following for each transaction:

- the date of the transaction
- a description of the transaction, showing the type of transaction
- the amount of the transaction, indicating whether it is a debit or credit (often in different columns)
- a column for the balance after each transaction.

Let's look at an example:

<u>EXAMPLE 1</u>: Below is an extract of Tyreeq's bank statement for April 2020:

Date:	***Description:***	***Amount:***	***Amount:***	***Balance:***
1/4/2020	Pocket Money	R 500		R855
3/4/2020	ATM: withdrawal CASH		R200	R655
9/4/2020	Electronic purchase: Airtime		R110	???
20/4	Wages: Restaurant	R 325		R 1 090
23/4	Purchase: MCdonalds		R75	R 1 0 15
30/4	Bank charges: April		???	R 972,50

Questions on Example 1:

a) Which of the columns indicate the debit amount and which indicate the credit amount? Explain why you chose the specific columns.

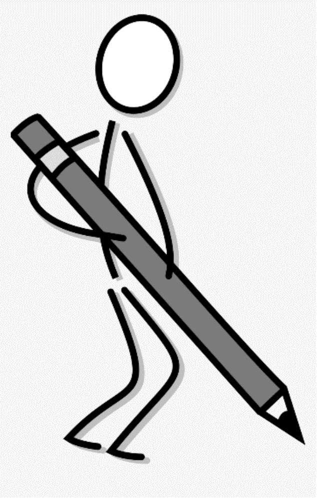
b) If Tyreeq received R500 pocket money on 1 April 2020, what was his balance at the start of the month? (His opening balance).

c) How much did Tyreeq spend on McDonalds? And When did he get it?

d) Calculate the missing value for his balance on 9 April.

e) Calculate the missing value for the amount of money he was charged for bank charges.

f) What is the closing balance of Tyreeq's bank account for April 2020?



Solutions, Example 1:

a) the first column indicates credit, as all transactions that increase his balance (money that gets paid into his account are here). The second column is the debit column as all transactions that decrease his account are here.
b) $R855 - R500 = R355$
c) R75 on 23 April
d) $R655 - R110 = R545$
e) $R1\,015 - R972{,}50 = \ R42{,}50$
f) $R972{,}50$

Bank fee charges:

- Banks normally charge you fees for any services they provide. If you look at a brochure for bank fees you will see that many of them have a monthly fee that needs to be paid (fixed amount) to keep the account open.
- Some banks also charge transaction fees for individual transactions (like depositing or withdrawing money).
- Some banks offer free transactions on some accounts (like 4 free withdrawals a month, or unlimited "swiping" of a card to make purchases.)
- Every bank, uses a different fee structure for different accounts and it is important for the account holder to familiarize themselves with the fee structure to keep their monthly bank charges as low as possible.

- *We will look at examples of how to perform calculations with bank fee charges in week 2.*

Let's look at an example:

EXAMPLE 2 : Below is an extract of the bank charges & transaction fees for B- Bank:

Transaction:	**Fee:**
Monthly Account Charge	R55
Deposits:	
Cash deposit at the ATM	R1,50 + R2,00/ R100
Cash deposit at a branch counter	R20 + 3,5 % of transaction value
Cash Withdrawals:	
At B-Bank ATM	R2,00 per R100
At other Bank's ATM	R11,50 + R2,00/R100
At POS	R2,00
Balance enquiries:	
On internet Banking	FREE
At B- Bank ATM	FREE
At other Bank's ATM	R4,50

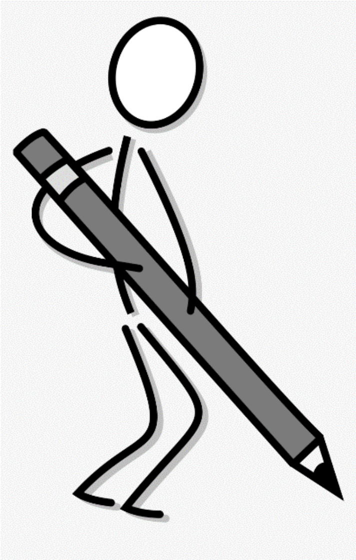
This is a fixed amount of R55 payable monthly

What looks like the cheapest option to deposit money? Can you think why?

Why would you not recommend someone withdraw money from another bank?

Remember: we will be looking at how to perform calculations with bank charges in the next lesson. For now, familiarize yourself with changes in cost & how different types of transactions normally have different transaction charges/fees at different places.

ACTIVITIES/ASSESSMENT	*Use the information above to help you answer the questions that follow:*



1. Look at Khosi's bank statement below and answer the questions that follow:

Account Holder: *Khosi Cole*			***Statement date:***	*2 September 2020*
Acc no:	*57193205467*		***Frequency:***	*Monthly*
Acc Type:	*Debit*		***Statement period:***	*From: 1 Aug 2020* *To: 31 Aug 2020*
Date:	***Description***	***Debit(R)***	***Credit: (R)***	***Balance(R)***
1/8	***1.1***			*14 000*
3/8	*POS: Pick n Pay*	*235,65*		***1.2***
15/8	*Sales commission*		*7 852*	*21 616,35*
16/8	*Car Payment*	***1.3***		*18 161,35*
16/8	*Airtime: Cell C*	*255*		*17 906,35*
18/8	*DisChem*	*392,25*		*17 514,10*
25/8	*Salary*		*14 500*	***1.4***
26/8	*Rent*	*6 500*		*25 514,10*
31/8	*Banking fees:*	***1.5***		*25 281,10*
31/8	*Closing balance*			***1.6***

Use the bank statement above to answer the questions that follow:

1.1 What is the description missing from the Statement on 1 August?
1.2 What is the balance in the account on 3 August?
1.3 How much was the car payment on 16 August?
1.4 Calculate the account balance on 25 August.
1.5 For the monthly banking fees:
  a) indicate whether it will go in the debit or credit column
  b) determine the missing amount.
1.6 What is the closing balance on Khosi's bank account?
1.7 What does the "debit" column mean in this case?
1.8 What is the account type and number?
1.9 How often does the account holder receive a statement from the bank?
1.10 How many times was money paid into this account in August?

Solutions Question 1:

1.1	*Opening balance*	*1.2*	*R14 000 – R235,65 = R13 764,35*
1.3	*R21 616,35 – R18 161,35 = R3 455*	*1.4*	*R17 514,10 + R4 500 = R32 014,10*
1.5	*a) debit* *b) R25 514,10 – R25 281,10 = R233*	*1.6*	*R25 281,10*
1.7	*Money that is paid out of the account*	*1.8*	*Debit* *57193205467*
1.9	*Monthly*	*1.10*	*Twice (2)*

2. Look at an extract from Ben's bank statement below:

CREDIT CARD STATEMENT			**Account no:** 5471 7777 789 ****	
Ben Bennett **123 Avenue** **Cape Town**			**Due Date:**	4/04/20
			Minimum Due:	R 300
			New Balance:	R1 379,90
Ref number:	**Date:**	**Description:**	**Debits**	**Credits & Payments**
0077623	02/03	ABC stores	108,20	
0317886	02/03	McDonalds	58,00	
7075061	10/03	Spar	159,72	
4871311	22/03	DEF store	128,00	
5887041	23/03	AAA company	109,32	
9283742	30/03	Payment thank you		40,00
Previous balance:	**-Payments**	**+ new charge**	**+ finance charge**	**= New Balance**
839, 62	**2.1**	**2.2**	17,04	**2.3**
Credit Limit:	R 3 000	**Credit available:**	**2.4**	

Use the bank statement above to answer the questions that follow:

2.1 What was the total payments for March?

2.2 Calculate the new charge for March.

2.3 Calculate the new balance on the credit card account after all transactions in March.

2.4 Calculate the amount of credit available.

2.5 What was the reference number for the purchase at SPAR?

2.6 What is the minimum payment amount due, and when is it due?

<table>
<tr><td></td><td>Solutions Question 2:
<table>
<tr><td>2.1</td><td>R40</td><td>2.2</td><td>R108,20 + R 58 + R 159,72 + R 128 + R 109,32 = R563,24</td></tr>
<tr><td>2.3</td><td>R839,62 – R40 + R563,24 + R17,04
= R1 379,90</td><td>2.4</td><td>R3 000 – R1 379, 90 = R1 620,10</td></tr>
<tr><td>2.5</td><td>7075061</td><td>2.6</td><td>R300
4/04/20</td></tr>
</table></td></tr>
<tr><td>CONSOLIDATION</td><td>Make sure that after going through this lesson you:
• understand the different types of banking accounts available to people and how they work.
• can interpret banking documents.
• can perform calculations with banking documents,
• understand the layout of these documents.
• can define important terms and identify items using these terms.</td></tr>
<tr><td>VALUES</td><td>Work independently.
Calculate accurately.</td></tr>
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