Assessment Guide

Primary Agriculture

Use mathematics to investigate and monitor
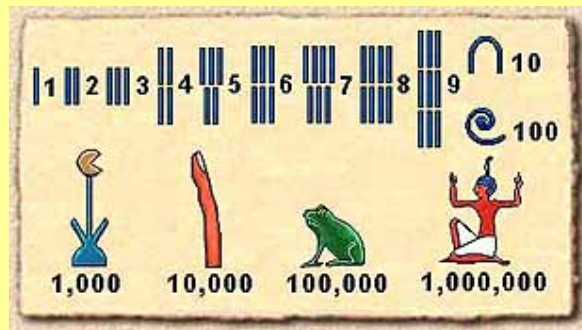
Assessor: . . . .

Workplace / Company: . . . .

Commodity: . . . . Date: . . . .

Before we start...

This assessment guide contains all necessary activities and instructions that will enable the assessor and learner to gather evidence of the learner's competence as required by the unit standard. This guide was designed to be used by a trained and accredited assessor whom is registered to assess this specific unit standard as per the requirements of the AgriSETA ETQA.

Prior to the delivery of the program the facilitator and assessor must familiarise themselves with content of this guide, as well as the content of the relevant Learner Workbook.

> **Please Note:**
>
> This Unit Standard **7456** Assessment Guide must be read in conjunction with the generic Assessor Guide as prescribed and published by the AgriSETA.

The assessor, facilitator and learner must plan the assessment process together, in order to offer the learner the maximum support, and the opportunity to reflect competence.

The policies and procedures that are required during the application of this assessment are available on the website of the AgriSETA and should be strictly adhered to. The assessor must familiarise him/herself with this document before proceeding.

This guide provides step-by-step instructions for the assessment process of:

Title:	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues		
US No: 7456	**NQF Level:** 3		**Credits:** 5

T
This unit standard is one of the building blocks in the qualification listed below. Please mark the qualification you are currently assessing, because that will be determined by the context of application:

Title	ID Number	NQF Level	Credits	Mark
National Certificate in Animal Production	49048	3	120	ρ
National Certificate in Plant Production	49052	3	120	ρ

Please mark the learning program you are enrolled in:

Are you enrolled in a:	Y	N
Learnership?	ρ	ρ
Skills Program?	ρ	ρ
Short Course?	ρ	ρ

> **Note to Assessor:**
>
> If you are assessing this module as part of a full qualification or learnership, please ensure that you have familiarized yourself with the content of the qualification.

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Activity Answers

1

SO 1

Instructions to learner:

Discuss and complete

Learner Guide: Page 13   Facilitator Guide: Page 11

1. Individually, reflect on this question and discuss in your groups and identify three or more sources of money.

   Model Answer(s):
   - *Salary from a paid job.*
   - *Sale of something.*
   - *A present.*
   - *Any other valid answer*

2. How do you plan to distribute your money at the end of the month? Discuss and identify items you plan to spend money on?

   Model Answer(s):
   Answers will vary from student to student, depending on their circumstances. Items could include:
   Rent
   Food
   Transport
   Medical
   Repayments
   Telephone
   Electricity   etc

3. List all the things you spend your money on when you earn salary at the end of the month and write the amounts you spend on each one of the items.

   Model Answer(s):
   Answers will vary from group to group

4. How much is your expenditure plan costing you if your net salary is R900, 00 per month?

   Model Answer(s):
   Answers will vary from group to group

5. List and compare your expenditure plan with other members within your group.

   Model Answer(s):
   Answers will vary from group to group

6. Discuss whether your net salary can cover afford your expenditure plan.

   Model Answer(s):
   Answers will vary from group to group

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Activity Answers

2

SO 1

Instructions to learner:

Individual activity

Learner Guide: Page 15   Facilitator Guide: Page 11

Activity 2.1

You still earn R900, 00 per month. Plan how you would distribute and allocate this amount according to your expenses over one month. Use the table below to allocate your money accordingly.

Income R900, 00

Item	Amount	Outstanding amount of debt	% of total expenditure
Pay for accommodation			
School fees			
Food and cleaning detergents			
Electricity			
Transport			
Medical expenses			
Insurance			
Burial Society/ Stokvel			
Entertainment			
Savings			
Overdraft			
Clothing account			
Total expenditure			
Total Income			100%
Shortfall/ variance			

Model Answer(s):
Answers will vary from student to student

> **a.**   Is your monthly net salary enough to cover your living expenses? If not, what should you do to live within your means?

Model Answer(s):
Answers will vary from student to student

> **b.**   Assume prices will go up by 10% next month on all items. Calculate the new cost of after the increase. Decide which items might have to be cancelled.

Model Answer(s):
Calculations will vary for each student depending on values cited in original table. To make assessment easier here, it may be in the assessors interest to give the following values to students for the Amount column

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Item	Amount	New cost after 10% increase	% of total expenditure
Pay for accommodation	R250	_250 x 1,1 = 275_	_275/990 x 100 = 27,8%_
School fees	R50	_55_	_5,5%_
Food and cleaning detergents	R250	_275_	_27,8%_
Electricity	R50	_55_	_5,5%_
Transport	R85	_93,5_	_9,4%_
Medical expenses	R10	_11_	_1,1%_
Insurance	R10	_11_	_1,1%_
Burial Society/ Stokvel	R20	_22_	_2,2%_
Entertainment	R30	_33_	_3,3%_
Savings	R30	_33_	_3,3%_
Overdraft	R40	_44_	_4,4%_
Interest on overdraft	R5	_5,5_	_0,6%_
Clothing account	R30	_33_	_3,3%_
Furniture account	R40	_44_	_4,4%_
Total expenditure	**R900**	**990**	
Total Income	**R900**	_900_	100%
Shortfall/ variance	**0**	**-90**	

Which items must be cancelled?

Model Answer(s):
Luxuries must go e.g. clothing, entertainment, etc

Activity 2.2

Use the information gathered in 2.1 to draw up your personal budget

Item	Amount
Will vary from student to student.	
Total	

Discuss in your groups and identify cost items that you would/can reduce cost on to live within your current net salary.

Model Answer(s):
Answers will vary

Assign a team member as a spokesperson to report back your plan to the entire group. You can note the main points below.

> **Model Answer(s):**
> *Answers will vary*

Activity 2.3

Suppose *ESKOM* has increased tariffs by 3% and *TELKOM's* tariffs have increased by 5%.

a If you were spending R350, 00 on electricity, calculate the amount you will spend on electricity based on the new tariffs.

> **Model Answer(s):**
> *350 x (1+5/100) = R367.50*

b If you were spending R250, 00 on telephone, how much will you spend now based on the percentage increase?

> **Model Answer(s):**
> *250 x (1 + 5/100) = 262.5*

Activity 2.4

Jabulani grows vegetables, which he sells at a market in the nearby village. The table below contains a list of his expenses and income.

Fertilizer	R50.00
Water	R37.50
Vegetable seeds or seedlings	R24.64
Money from vegetable sales	R206.56
Rent for the stall at the market	R70.00

a. Calculate Jabulani's expenses and income

> **Model Answer(s):**
> *Expenses = 50 + 37.50 + 24.64 + 70 = 182.14*
> *Income = R206.56*

b. Does Jabulani make a profit from selling his vegetables? If so, how much profit does he make?

> **Model Answer(s):**
> *Profit = Income – Expenses = 206.56 – 182.14 = R24.42*

c. Calculate Jabulani's profit margin.

> **Model Answer(s):**
> *Profit margin = profit/expenses x 100 = 24.42/182.14 x 100 = 13.41%*

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Activity Answers

3

SO 2 AC 1-4

Instructions to learner:

Individual activity

Learner Guide: Page 30   **Facilitator Guide: Page 12**

1. Calculate the interest amount for each of the principals for the stated simple interest rate and time period:

   a   R500, 00; 7% per year; 1 year

   b   R500, 00; 24% per year; 3 months

   c   R1000, 00; 8% per year; 1 year

   d   R200, 00; 12% per year, 18 months

Model Answer(s):

Information	Calculation

a) I =?
    P = R500
    r = 7% = 0,07
    n = 1
	I = Prn
	    = 500 x 0,07 x 1
	    = R35

b) I =?
    P = R500
    r = 24% = 0,24 per year
    n = 3 months = 3/12 year = 0.25 years
	I = Prn
	    = 500 x 0,24 x 0,25
	    = RR30

c) I =?
    P = R1000
    r = 8% = 0,08
    n = 1
	I = Prn
	    = 1000 x 0,08 x 1
	    = R80

d) I =?
    P = R200
    r = 12% = 0,12
    n = 18 months = 1,5 years
	I = Prn
	    = 200 x 0,12 x 1,5
	    = R36

2. Let's say you invested R2 000,00 at an interest rate of 6% over 5 years. What would the investment increase to?

Model Answer(s):

Information	Calculation

A =
P = R 2 000
r = 6% = 0,06
n = 5 years
	A = P + Prn
	    = 2 000 + 2000 x 0,06 x 5
	    = 2 000 + 600
	    = R 2 600

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3. A credit card holder has owed the credit card company R200,00 for a month and receives an account containing an interest charge of R3. Find the interest rate.

Model Answer(s):

Information	Calculation
I = R3	*I = Prn*
P = 200	*3 = 200 x r x 0,08333*
n = 1 month = 1/12 years = 0,0833 years	*3/(200x0, 08333) = r*
	r = 0,18
r = ?	*r = 18/100 = 18%*

4. Assume your commission is 30% of sales. Your sales were R5000, 00. What is the value of the commission owed to you?

Model Answer(s):

Commission = 0,3 x 5 000 = R1 500

5. You bought a house for R150 000,00. The value of your house appreciates at 15% per year. How much is your house worth after 2 years?

Model Answer(s):

Information	Calculation
A =?	$A = P (1 + r)^n$
P = 150 000	$= 150\ 000\ (1 + 0,15)^2$
r = 15% = 0,15	$= 150\ 000\ (1,15)^2$
n = 2	*= 198 375*

6. You bought a tractor for your farm for R140 000,00. It depreciates by 15% per year. How much will the tractor be worth in 7 years time?

Model Answer(s):

Information	Calculation
A =	$A = P (– r)^n$
P = 140 000	$= 140\ 000\ (1-0,15)^7$
r = 15% = 0,15	*= 101 150*
n = 7 years	

7. You plan to invest R10 000 in a bank. Which will give you a higher return:

    a   Investing at 14% compounded twice a year or

    b   Investing at 13,5% compounded annually.

Model Answer(s):

Information	Calculation
A =?	$A = P (1 + r)^n$
P = 10 000	$= 10\ 000\ (1+0,07)^2$
r = 14% = 0,14 per year	*= 11 449*
but compounded twice a year, thus 0,07 at a time	
n = 1 year = 2 x 6 months	

$A = ?$ $P = 10\ 000$ $r = 13,5\% = 0,135$ per year $n = 1$ years	$A = P\,(1 + r)^{n}$ $= 10\ 000\ (1+0,135)^{1}$ $= 11\ 350$

8. How can you achieve improvements in productivity?

Model Answer(s):

Improved services, increased volume, reduced costs

9. How can an organization in the short term, improve productivity through its employees?

Model Answer(s):

Make sure that employees improve customer service, that employees don't waste time or money (like long phone calls), don't waste resources (use both sides of paper, don't photocopy unnecessarily, reuse paper clips, etc

10. What are the key elements of productivity?

Model Answer(s):

a)   The Outcome of productivity is Continuous Improvement of Performance;
b)   The Improvement must be Measurable;
c)   Key drivers of productivity are:
      i.   Effectiveness (Doing the right things)
      ii.   Efficiency (Doing things the right way)
      iii.   Utilization (Optimum use of human capital and physical resources)
      iv.   Elimination of all forms of waste
d)   The beneficiaries of productivity must be the:
      i.   Environment
      ii.   Economy, and
      iii.   Society

11. What impact will HIV/AIDS have on productivity?

Model Answer(s):

See notes in Learner Guide

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12. Given the following table answer the questions to follow.

Table 3.1 National budget revenue, 2003/04 estimates and audited outcome			
R billion	Budget estimate	Revised estimate	Audited outcome
Taxes on income and profits	181,5	176,0	175,9
Persons and individuals	97,3	98,9	99,2
Companies	66,6	61,5	61,7
Secondary tax on companies	8,0	6,0	6,1
Other	9,6	9,6	8,8
Taxes on property	5,9	6,5	6,7
Domestic taxes on goods and services	109,6	110,6	110,2
Value-added tax	81,0	81,0	80,7
Specific excise duties	11,4	11,7	11,4
Levies on fuel	16,3	16,4	16,7
Other	0,9	1,5	1,5
Taxes on international trade and transactions	11,3	8,8	8,4
Stamp duties and fees	1,8	1,5	1,4
Total tax revenue	310,0	303,3	302,5
Non-tax revenue and repayments	4,2	6,7	6,6
Less: Southern African Customs Union payments	-9,7	-9,7	-9,7
Main budget revenue	304,5	300,3	299,4

  a What percentage (based on budget estimate) does taxes on income and profits make of the main budget revenue?

Model Answer(s):

181,5/304,5 x 100 = 59,6%

  b What percentage (based on budget estimate) of domestic taxes on goods and services is allocated to VAT?

Model Answer(s):

109,6/304,5 x 100 = 35,99%

13.   What is Ad valorem tax?

Model Answer(s):

An Ad valorem tax is a tax based on the assessed value of real estate or personal property. It is a tax levied according to the value of the property, or on the sale of items like cigarettes

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14. What is VAT?

Model Answer(s):

VAT stands for "value added tax". In South Africa VAT is 14%. That means that you pay 14% extra every time you buy something.

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15. What is income tax?

Model Answer(s):

Income tax is a tax that you pay on your salary. The more you earn, the higher the percentage of tax that you pay. Income tax is usually deducted directly from your pay. Your employer pays the tax to the Receiver of Revenue.

4

SO 3 AC 1-3

Instructions to learner:

Individual activity

Learner Guide: Page 44   Facilitator Guide: Page 13

This activity will be done over six months. Keep accurate data of actual expenses and file your receipts as evidence wherever possible in your portfolio of evidence.

Description	Sept 05		Oct 05		Nov 05		Dec 05		Jan 06		Feb 06	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
Total												

Model Answer(s):

Answers will vary

Summative Test and Attitude & Attribute Evaluation

Before the knowledge test is undertaken, the learner must be reminded of what is expected from him / her in terms of summative and reflexive competence. Read and explain to the learner, the **Preparation for Your Final Assessment** section in the learner workbook. Learners and assessor should sign off this section to acknowledge that this step was completed.

Please set up a knowledge test from the questions given as a guideline to learners and supply each learner with a test sheet.

Supply each report with the following heading:

Unit Standard:	7456	NQF Level:	3
Learner Name:			

Questions	Model Answers
1. Use mathematics to plan and control personal, regional and/or national budgets and income and expend	As per assessment criteria
2. Use simple and compound interest to make sense of and define a variety of situations	As per assessment criteria
3. Use mathematics to debate aspects of the national economy	As per assessment criteria

My Notes ...

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Assessment Feedback Form

Comments / Remarks
Feedback to learner on assessment and / or overall recommendations and action plan for competence:
Feedback from learner to assessor:

Assessment Judgement You have been found:	Actions to follow:
⚪ Competent ⚪ Not yet competent in this unit standard	⚪ Assessor report to ETQA ⚪ Learner results and attendance certification issued
Learner's Signature:	**Date:**
Assessor's Signature:	**Date:**
Moderator's Signature:	**Date:**

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