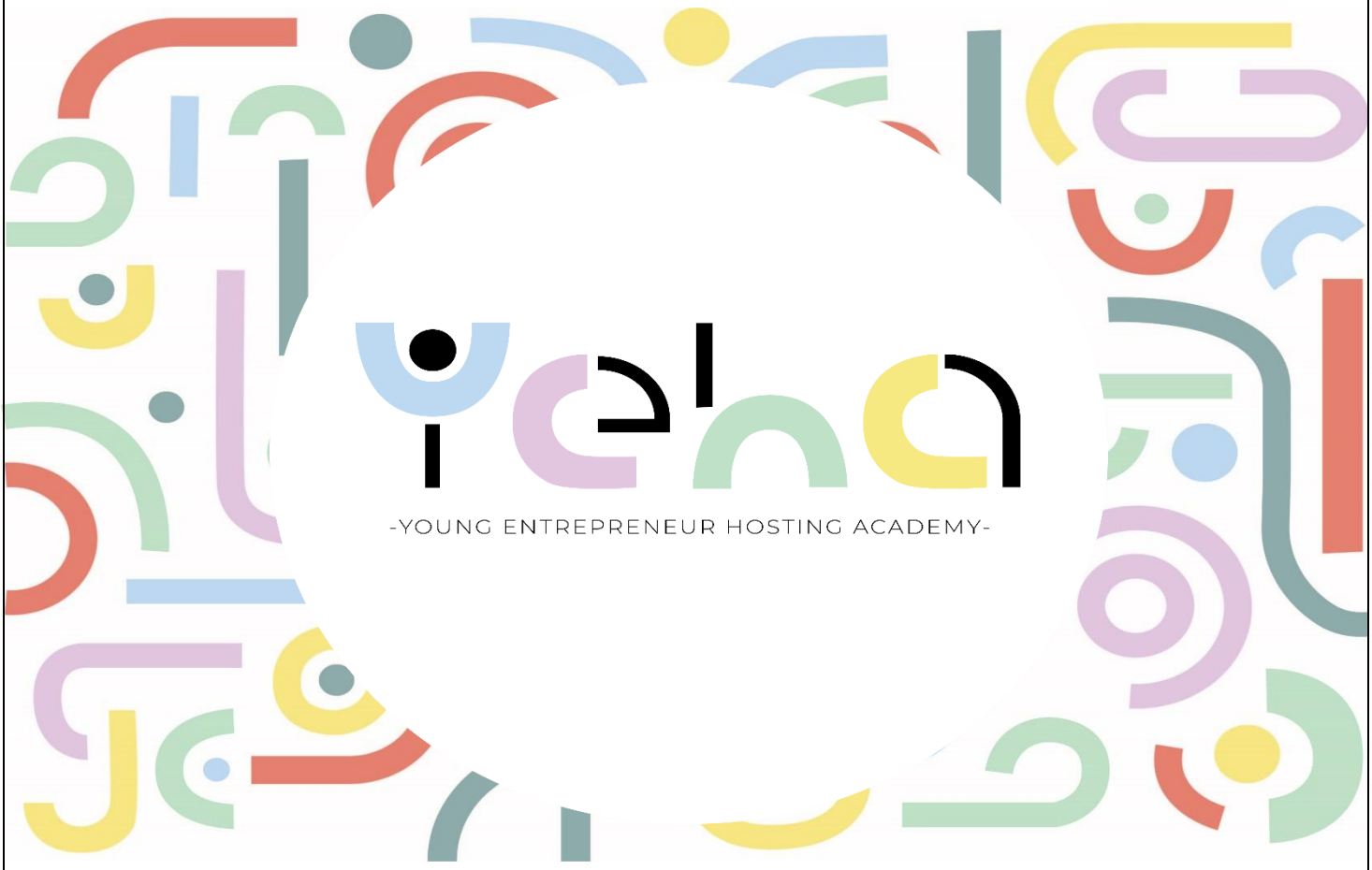

yeha
-YOUNG ENTREPRENEUR HOSTING ACADEMY-

FACILITATOR/ASSESSOR SUMMATIVE ASSESSMENT GUIDE & MEMO

Numeracy Level 2

Unit Standard 7480 Level 2 Credits 3
Unit Standard 9008 Level 2 Credits 3
Unit Standard 9007 Level 2 Credits 5
Unit Standard 7469 Level 2 Credits 2
Unit standard 9009 Level 2 Credits 3

CONTENTS

Contact Details

Assessor Details				
Name				
SETA			Reg. No:	
Contact Details	e mail:			
	Phone:		Fax:	
Moderator Details				
Name				
SETA			Reg. No:	
Contact Details	e mail:			
	Phone:		Fax:	
Candidate Details				
Surname			Name	
Employer				
Branch			ID No	
Contact Details	e mail:			
	Phone:		Fax:	

Competence

Congratulations on completing the following programme. We sincerely hope you enjoyed the programme and that the learning experience was enriching.

The fact that you have attended training, however, is not sufficient evidence of your competence for us to award you a certificate and the credits attached to this programme. You are required to undergo assessment in order to prove your competence to achieve credits leading to a national qualification.

Being Declared Competent Entails:

Competence is the ability to perform whole work roles, to the standards expected in employment, in a real working environment.

There are three levels of competence:

- **Foundational competence**: an understanding of what you do and why
- **Practical competence**: the ability to perform a set of tasks in an authentic context
- **Reflexive competence**: the ability to adapt to changed circumstances appropriately and responsibly, and to explain the reason behind the action

To receive a certificate of competence and be awarded credits, you are required to provide evidence of your competence by compiling a portfolio of evidence, which will be assessed by a Services SETA accredited assessor.

You Have to Submit a Portfolio of Evidence

A portfolio of evidence is a structured collection of evidence that reflects your efforts, progress and achievement in a specific learning area, and demonstrates your competence.

The Assessment of Your Competence

Assessment of competence is a process of making judgments about an individual's competence through matching evidence collected to the appropriate national standards. The evidence in your portfolio should closely reflect the outcomes and assessment criteria of the unit standards of the learning programme for which you are being assessed. To determine a candidate's knowledge and ability to apply the skills before and during the learning programme, formative assessments are done to determine the learner's progress towards full competence. This normally guides the learner towards a successful summative (final) assessment to which the assessor and the candidate only agree when they both feel the candidate is ready.

Should it happen that a candidate is deemed not yet competent upon a summative assessment, that candidate will be allowed to be re-assessed. The candidate can, however, only be allowed two reassessments. When learners have to undergo re-assessment, the following conditions will apply:

- Specific feedback will be given so that candidates can concentrate on only those areas in which they were assessed as not yet competent
- Re-assessment will take place in the same situation or context and under the same conditions as the original assessment
- Only the specific outcomes that were not achieved will be re-assessed

Candidates who are repeatedly unsuccessful will be given guidance on other possible and more suitable learning avenues. In order for your assessor to assess your competence, your portfolio should provide evidence of both your knowledge and skills, and of how you applied your knowledge and skills in a variety of contexts. This Candidate's Assessment Portfolio directs you in the activities that need to be completed so that your competence can be assessed and so that you can be awarded the credits attached to the programme.

Appeals & Disputes

The candidate has the right to appeal against assessment decision or practice they regard as unfair. An Appeals and Disputes procedure is in place and communicated to all assessment candidates in order for them to appeal on the basis of:

- Unfair assessment
- Invalid assessment
- Unreliable assessment
- Unethical practices
- Inadequate expertise and experience of the assessor

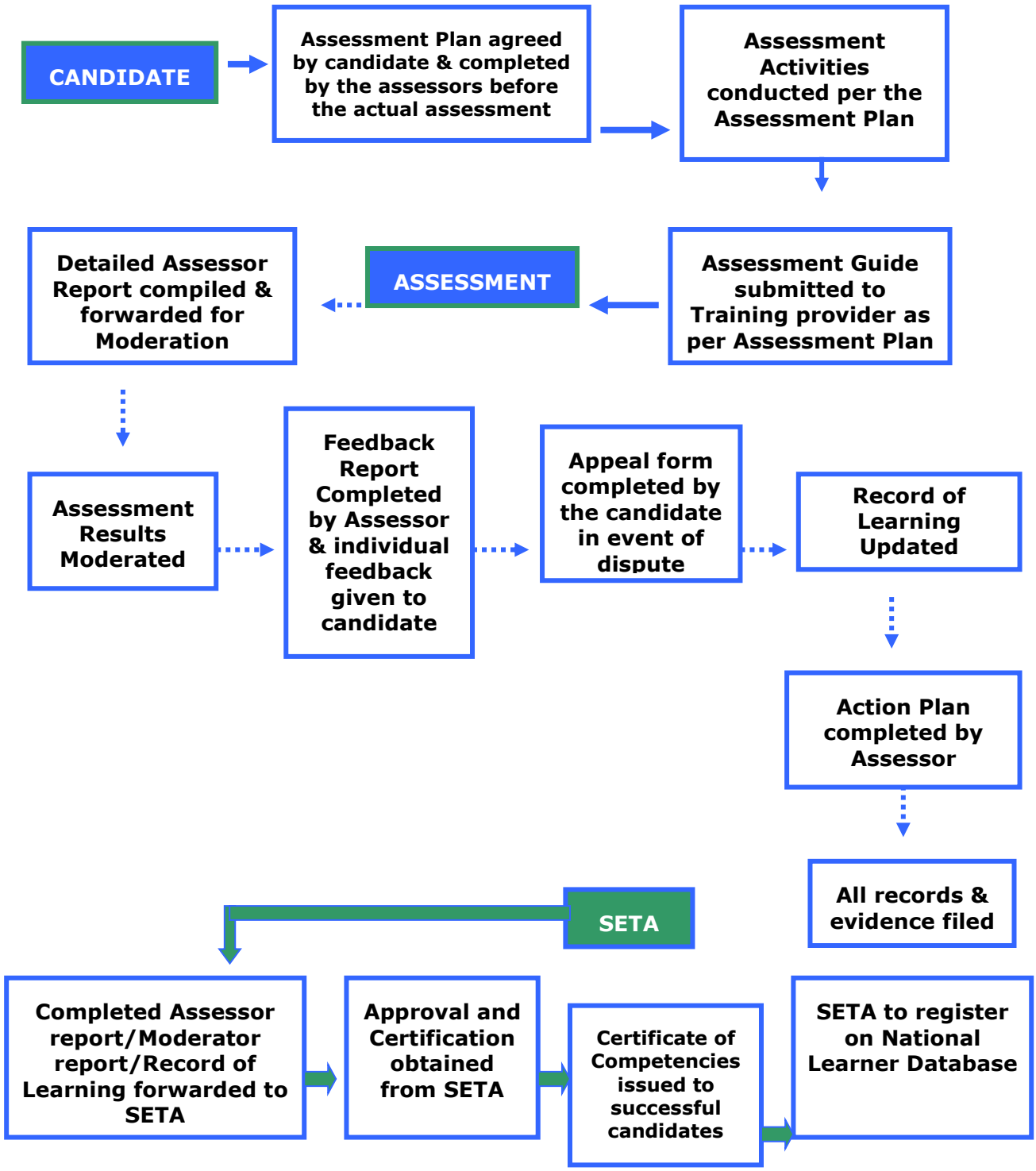
Appeals have to be lodged in writing (Candidate Appeal Form) & submitted to the Training Provider internal moderator within 48 hours, following the assessment in question. The moderator will consider the appeal & make a decision regarding the granting of a re-assessment. The learner will be informed about the appeal-outcome within 3 days of lodging the appeal. Should the learner not be satisfied with the internal appeal outcome, the learner will be advised of the rights to refer the matter to the SETA ETQA.

Abbreviations used in this guide:

C = Competent

NYC = Not Yet Competent

Assessment Process Flow



PORTFOLIO OF EVIDENCE

Portfolio Building

Your Portfolio of Evidence (PoE) contains the evidence needed to declare you competent and to award credits towards the award of this qualification to you. Evidence should be authentic and reflect both your knowledge of the subject and your ability to apply this knowledge in the workplace. Thus, evidence day to day activities supporting the specific outcomes addressed by this learning programme should complement the theoretical learning you attended and were assessed on.

There are FIVE key steps in creating a portfolio that will reflect your competence.

Plan Your Portfolio

Plan and document the sequence, graphics and layout of your portfolio. This will assist you in following a logical sequence, which makes the Portfolio also much more user friendly and understandable for the assessor. It will also reflect your professional approach and attitude towards the subject matter, your work and your life. Impact and appearance always contribute to or affect your chances of being taken seriously and declared competent!

Gather The Evidence

An evidence checklist has been provided (Section 4) to tell you what evidence needs to be gathered for assessment purposes. However, there are four broad categories of evidence that you should include:

- Knowledge evidence (your knowledge questionnaire)
- Direct performance evidence (actual samples of your work or records of activities captured on audio or video tape)
- Indirect performance evidence (documentary records of your performance e.g. appraisals, photographs, testimonials, self-assessments, customer ratings etc.)
- Supplementary evidence (to confirm the authenticity of your evidence)

Evaluate Your Evidence

Once you have collected your evidence, evaluate each piece by ensuring that it is:

- Valid (relevant to the unit standard/s being assessed)
- Authentic (clearly your own work)
- Current (not more than 2 years old)
- Sufficient (adequate to prove your competence against all of the assessment criteria and range statements in the unit standard/s)

Cross-Reference Your Evidence To The Unit Standards

Evidence for assessment against unit standards must be linked to the outcomes of the unit standard in question. An evidence locator grid is useful for this.

Organise Your Information

How you structure your portfolio is critical. Your design and layout must look professional and clearly articulate your achievements, and it should make sense to someone seeing it for the first time. Use the following structure as a guide:

1. A title page indicating:
    - The title of the programme
    - The unit standard titles to which the programme is aligned
    - The assessment centre (The training provider)
    - Your name, position and organisation
    - Your contact details
    - The name of your assessor
    - The name of your moderator
    - The date
2. An index
3. Background information
    - Curriculum Vitae
    - Organisation profile
    - Job profile
    - Organisation/department structure
4. A copy of the unit standard/s
5. Your assessment plan
6. Your completed Knowledge Questionnaire
7. An evidence locator grid
8. The evidence itself
9. Supporting evidence e.g. witness testimonies, reflections and witness status list
10. Assessment records

Learner Documents

Learner Curriculum Vitae

Please file your CV behind this page. Please remember to include a copy of your Identity Document (ID).

Attendance Registers

File your attendance registers behind this page.

ASSESSMENT STRATEGY

These assessment exercises will cover the assessment criteria for the unit standard in order to prove competence. The purpose of the assessment process is to gather enough evidence to prove that the assessment criteria were achieved.

Competency will be assessed through a knowledge questionnaire as well as workplace activities and assignments recorded in POE. Assessment evidence should be sufficient to prove that the candidate is capable in all required tasks set by the unit standards and a competency judgement will be made regarding the exit level outcome. Principles of fairness, validity, practicability, reliability and consistency will be adhered to throughout.

<table>
<tr><td>Unit standard</td><td colspan="2">Numeracy Level 2</td><td>Unit Standard Codes</td><td>7480; 9008; 9007; 7469; 9009.</td></tr>
<tr><td>Level</td><td colspan="2">2</td><td>Credits</td><td>16</td></tr>
<tr><td>Purpose of Assessment</td><td colspan="4">The purpose of this assessment is to achieve the first step into applying the acquired skills and knowledge in the workplace</td></tr>
<tr><td>Assessment Procedures</td><td colspan="4">❖ An integrated assessment approach will be followed to allow for practical and theoretical components. The entails the assessment of a number of unit standards, outcomes and criteria together in one assessment activity
❖ Candidates are not only assessed against specific outcomes, but also on critical outcomes, attitudes and values
❖ A summative competence judgment will be made on the basis of all assessment evidence produced, that proves that the candidate can be consistently judged as competent against the outcomes of the unit standards and the qualification as a whole.
❖ Candidates take responsibility for their own assessment and should notify the assessor when they are ready for assessment
❖ Candidates will receive feedback after the summative assessment, which will be discussed after all assessments have been completed
❖ All assessments will be reviewed to ensure that assessment practices are valid, fair, transparent, consistent and current
❖ An Internal/External moderator will moderate assessment practices
❖ The SETA will also conduct external moderation</td></tr>
<tr><td rowspan="2">Context of Assessment</td><td>Assessment Method</td><td>Assessment Conditions</td><td>Who will conduct assessment</td><td>Assessment results and feedback</td></tr>
<tr><td>Questionnaires
Work sample
Observation</td><td>Input based assessments</td><td>Assessor</td><td>Immediate</td></tr>
</table>

Assessment Preparation

Preparing The Candidate

Name of Candidate		**Date**	
		Time	
Name of Assessor		**Venue**	

How to prepare the candidate	Document Requirements	Agree (tick)	Action Required
Explain to the candidate why your are meeting and the purpose of the assessment	NQF Framework Assessment process		
Discuss the assessment plan in detail	Assessment strategy		
Explain assessment process, show assessment instruments to candidate and describe assessment conditions	Assessment instruments		
Identify the role-players during assessment	Assessors Moderator		
Describe the evidence required to be declared competent	Examples of evidence		
Explain how evidence will be judged			
Explain to the candidate how to prepare: Give candidate summative task description	Summative task description		
Confirm with the candidate what he/she should bring to the assessment	Detailed briefing on exact requirements to be given to candidate		
Ensure that candidate understands the procedures of all assessment practices	Appeals procedure Moderation procedure Assessment policy		
Ask the candidate if he/she foresees any problems or identify any special needs	List needs		
Check with candidate that he/she clearly understands the assessment procedure			

Comments or questions:

Assessor’s declaration:

I hereby declare that I have prepared the candidate for assessment, the candidate was consulted and all stakeholders have been informed and the workplace is prepared to ensure valid and fair assessment.

Assessor Name	Signature

Agreed Assessment Plan 7480

Candidate's Name:			
Assessor's Name:			
Unit Standard Title:	7480 Demonstrate understanding of rational and irrational numbers and number systems		
Special Assessment Requirements			
Event	**Date, time and location**	**Resources required**	**Evidence to be generated**
Attend Training		Training material, Facilitator	Attendance Register
Complete assessments		Assessments	Completed Assessments
Complete Portfolio of Evidence		Portfolio of Evidence guide	Completed Portfolio of Evidence
Submit Portfolio of Evidence to Training provider			Acknowledgement of receipt from Training provider
Assessor roles and responsibility			
Roles	❖ Assessor ❖ Guide ❖ Feedback Agent ❖ Reviewer		
Responsibilities	❖ Consult candidate re assessment, assessment process and plan ❖ Agree assessment process and plan with candidate ❖ Forward documentation to candidate: plan, guide and assessment instruments ❖ Assess candidate with the use of different instruments ❖ Provide feedback on assessment findings ❖ Support candidate through assessment process ❖ Source feedback from candidate on assessment process ❖ Review assessment process and outcome ❖ Use assessment process as opportunity to transform assessment activities and outcomes		

Candidate roles and responsibility	
Roles	❖ Candidate ❖ Feedback agent ❖ Reviewer
Responsibilities	❖ Be available for assessment ❖ Be actively involved in the consultative process ❖ Learn from the assessment process ❖ Provide feedback to the assessor in terms of the assessment as learning activity ❖ Provide feedback to the assessor on the efficacy of the assessment process ❖ Review own role and assessor role in the assessment process
Assessment Instruments	❖ Portfolio of evidence ❖ Work sample ❖ Observation

Assessment Process	
Step	**Date**
❖ Evaluation of POE addressing Essential Embedded Knowledge in unit standards ❖ Evaluation of Research Projects and other evidence address specific unit standards ❖ Consultation: assessment plan and assessment activities and instruments. Pre-assessment moderation and interviews conducted at this stage ❖ Observation: feedback on assessment against specific outcomes, critical outcomes and constructs in unit standards ❖ Feedback: to candidate regarding sufficiency of evidence and possible interview to gain supplementary evidence ❖ Feedback to candidate regarding assessment findings as well as review process	
Feedback	Written feedback to be given to all stakeholders at the end of the assessment process, as well as verbal feedback to the candidate during assessment activities
Recording Process	Process and findings to be recorded and submitted for record keeping purposes as well as moderation and verification
Review Process	The review process is the responsibility of the assessor and the candidate. Joint reviewing will take place after feedback has been given to the candidate
Right to appeal	The candidate must be advised of the right to appeal

	Step	Date
Accessibility and safety of environment	❖ Site inspection conducted ❖ Pre-assessment moderation conducted	
Resources Required	❖ Assignments ❖ POE ❖ Assessments	

I confirm that:

- ❖ I have been consulted on and have agreed to the training and assessment process as detailed in the assessment guide
- ❖ I have been advised of my right to appeal against any assessment that is unfair, unreliable, invalid or impracticable
- ❖ I have read and understood the appeal procedure
- ❖ I know that assessments may be moderated or verified by an external party
- ❖ The purpose of the assessment has been clearly explained to me
- ❖ The criteria have been discussed with me, and I know I will be assessed against these criteria
- ❖ I know when and where I will be assessed, and I was given fair notice
- ❖ I know how the assessment will be done, and any other requirements related to the assessment
- ❖ I am ready to be assessed

Signed: _____ **Date:** _____

_____

Overall Assessment Decision	Competent	Not yet competent	
Candidate's Signature		**Date**	
Assessor's Signature		**Date**	
Moderator's Signature		**Date**	

UNIT STANDARD 7480

Unit Standard Title

Demonstrate understanding of rational and irrational numbers and number systems

NQF Level

2

Credits

3

Purpose

This unit standard will be useful to people who aim to achieve recognition at some level in Further Education and Training or to meet the Fundamental requirement of a wide range of qualifications registered on the National Qualifications Framework

Learning Assumptions

The credit value is based on the assumption that people starting to learn towards this unit standard are competent in Mathematics and Communications at NQF level 1.

Range

Approximation in relation to the use of computing technologies, the distinction between exact and approximate answers in a variety of problem settings and measurement error in relation to the accuracy of instruments

More detailed range statements are provided for specific outcomes and assessment criteria as needed

Specific Outcomes and Assessment Criteria

Specific Outcome 1: Use and analyse computational tools and strategies, and make estimates and approximations.

Range: This outcome includes the need to

- use technology such as calculators
- demonstrate understanding of mathematical relationships and principles involved in computations
- find rational approximations to irrational numbers

Assessment Criteria

- Computational tools are used efficiently and correctly and solutions obtained are verified in terms of the context or problem
- Algorithms are executed appropriately in calculations
- Solutions involving irrational numbers are reported or recorded to degrees of accuracy appropriate to the problem
- Measurements are reported or recorded in accordance with the degree of accuracy of the instrument used
- Estimates and approximations are used appropriately in terms of the situation and distinctions are made between the appropriate use of estimates versus approximations: Technological and non-technological settings

- The roles and limitations of particular algorithms are identified in terms of efficiency and the complexity of the algebraic formulation
- The viability of selected algorithms is verified and justified in terms of appropriateness to context and efficiency

Specific Outcome 2: Demonstrate understanding of numbers and relationships among numbers and number systems. Notes: Demonstrate understanding of numbers and relationships among numbers and number systems, and represent numbers in different ways

Range: This outcome includes the need to:

- work with rational and irrational numbers
- explore repeating decimals and convert them to common fraction form
- use scientific notation for small and large numbers

Assessment Criteria

- Notation for expressing numbers is consistent with mathematical conventions
- Methods of calculation and approximation are appropriate to the problem types.
- Numbers and quantities are represented using rational and irrational numbers as appropriate to the context
- Scientific notation is used appropriately and consistently with conventions. Situations for the use of scientific notation are provided and described in terms of advantages
- Conversions between numbers expressed in different ways: Between decimal and scientific notation and between repeating decimals and common fractions

Unit Standard Essential Embedded Knowledge

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that the possession or lack of the knowledge can be inferred directly from the quality of the candidate's performance against the standards

- Number systems and rational and irrational numbers
- Estimation and approximation

Critical cross-field outcomes

Upon successful completion of this course, the learner will be able to:

- Collect, analyse, organise and critically evaluate information: Gather, organise, evaluate and interpret numerical information
- Use mathematics: Use mathematics to analyse, describe and represent realistic and abstract situations and to solve problems
- Communicate effectively: Use everyday language and mathematical language to describe relationships, processes and problem solving methods

Formative Assessments

During your training, you were required to complete a number of activities within each Lesson in your Learner Study Guide. You need to complete these activities and attach the evidence of each in this section of your PoE.

Summative Assessment Readiness Statement

Note: **R = Ready** for summative assessment. **NYR = Not Yet Ready** for summative assessment

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	7480 Demonstrate understanding of rational and irrational numbers and number systems		

ASSESSMENT DECISION			
Specific Outcome	R	NYR	Comments
Use and analyse computational tools and strategies, and make estimates and approximations.			
Demonstrate understanding of numbers and relationships among numbers and number systems.			

Assessor's / Facilitator's Declaration:

I hereby declare that I have assessed the learner's formative assessment and find the learner ready / not yet ready for the summative assessment

Assessor / Facilitator Name	Signature

SUMMATIVE ASSESSMENTS

Knowledge Questionnaire 7480

1. Is the following a real number or an integer? (1)

120

Integer

2. Is the following a real number or an integer? (1)

25.64

Real number

3. Explain the difference between rational and irrational numbers. (2)

Rational numbers have values that can be determined exactly and Irrational numbers
have values that cannot be exactly determined

4. The decimal number system has 10 elements. List them. (1)

0, 1, 2, 3, 4, 5, 6, 7, 8, 9 the learner gets one point if s/he starts with 0 and zero points if s/he starts with 1 and ends with 10

5. Explain an algorithm (1)

A sequence of calculations that sets out a series of detailed steps enabling a particular
result to be obtained, is called an algorithm. (1) OR an explanation such as the process
of long division, for instance, is an algorithm. (1)

6. Explain the difference between an integer and a real number. (2)

Integers are whole numbers (e.g. 1, 45, 77…) (1) and real numbers are numbers with
a decimal point (e.g. 24.59, 2.09 and 9.1) (1)
Whole numbers are numbers without fractions

TOTAL: 8

Practical Workplace Logbook

Attach the completed workplace logbook and workbook behind this page

Acknowledgment of Receipt

I _____

(Learner) acknowledge receipt of my Workplace assignment workbook on this the

_____ day of _____ 20_____

The process of on-the-job training has been explained to me.

_____

Signature of Learner

_____

Name of Facilitator/Mentor/Supervisor:

_____

Signature of Facilitator/Mentor/Supervisor

Indirect Evidence

Indirect Evidence is evidence produced about the learner from another source. This is usually in the form of reports of third party sources, i.e. sources other than the assessor.

Indirect evidence can be used to verify the authenticity of other forms of evidence. In addition, it may be necessary to corroborate these forms of evidence.

Sources of indirect evidence include:

- Team outputs
- Work completed at an earlier stage
- Performance appraisals
- Training records
- Testimonials
- Reviews and commendations
- Certificates and qualifications
- Medals, prizes and trophies
- Customer / client ratings

Please attach any indirect evidence you may have on the required outcomes within the PoE behind this page.

Declaration Of Authenticity Of Evidence

I (Initials and Surname)
ID No:
declare/certify that the learning activities completed in the Learner Activity Workbook in its entirety is my own original and authentic work (interpreter declaration to be completed where necessary) I acknowledge that should it come to the attention/reported to the Training Provider/ SETA or relevant authorities, and there is sufficient evidence to prove that there is an irregularity regarding the authenticity of this submission the necessary steps will be taken against me which can result in one or more of the following decisions being taken:
❖ A criminal case being opened, ❖ Learner achievement certificate cancelled, withdrawn ❖ Non processing of Learner Achievement submissions to the SETA pending the outcome of an investigation ❖ De-registration as an Assessor/Moderator (where unauthorised assistance is provided by the Assessor/Facilitator) ❖ Investigation into the accreditation status of the Training Provider if there is an irregularity on the part of the Training Provider
I know and understand the contents of this declaration: I have no objection to signing the prescribed declaration. The declaration was also explained to me by the Training Provider/Facilitator

Signature of Learner:	Date
Signature of Facilitator/Assessor:	Date

Evidence Locator & Sign-off 7480

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 7480	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO1: Use and analyse computational tools and strategies, and make estimates and approximations				
SO1, AC1 Computational tools are used efficiently and correctly and solutions obtained are verified in terms of the context or problem	Knowledge Questionnaire Assignment 1			
SO1, AC2 Algorithms are executed appropriately in calculations	Knowledge Questionnaire Assignment 1			
SO1, AC3 Solutions involving irrational numbers are reported or recorded to degrees of accuracy appropriate to the problem	Knowledge Questionnaire Assignment 1			
SO1, AC4 Measurements are reported or recorded in accordance with the degree of accuracy of the instrument used	Knowledge Questionnaire Assignment 1			
SO1, AC5 Estimates and approximations are used appropriately in terms of the situation and distinctions are made between the appropriate use of estimates versus approximations: Technological and non-technological settings	Knowledge Questionnaire Assignment 1			

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 7480	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO1, AC6 The roles and limitations of particular algorithms are identified in terms of efficiency and the complexity of the algebraic formulation	Knowledge Questionnaire Assignment 1			
SO1, AC7 The viability of selected algorithms is verified and justified in terms of appropriateness to context and efficiency	Knowledge Questionnaire Assignment 1			
SO2: Demonstrate understanding of numbers and relationships among numbers and number systems. Notes: Demonstrate understanding of numbers and relationships among numbers and number systems, and represent numbers in different ways				
SO2, AC1 Notation for expressing numbers is consistent with mathematical conventions	Knowledge Questionnaire Assignment 2			
SO2, AC2 Methods of calculation and approximation are appropriate to the problem types	Knowledge Questionnaire Assignment 2			
SO2, AC3 Numbers and quantities are represented using rational and irrational numbers as appropriate to the context	Knowledge Questionnaire Assignment 2			
SO2, AC4 Scientific notation is used appropriately and consistently with conventions. Situations for the use of scientific notation are provided and described in terms of advantages	Knowledge Questionnaire Assignment 2			

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 7480	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO2, AC5 Conversions between numbers expressed in different ways: Between decimal and scientific notation and between repeating decimals and common fractions	Knowledge Questionnaire Assignment 2			

Record of Learning

Candidate's Name:	ID No	
Assessor's Name:	Ass. Reg. No	
Moderator's Name:	Mod. Reg. No	
Date:		

UNIT STANDARD	NQF LEVEL	CREDITS	DATE OF COMPLETION	SIGNATURE OF ASSESSOR	SIGNATURE OF MODERATOR
7480	2	3			

ASSESSMENT REVIEW

NAME of LEARNER	**NAME of ASSESSOR**
VENUE	**DATE of REVIEW**
UNIT STANDARD	7480 Demonstrate understanding of rational and irrational numbers and number systems

Review Dimension	**ASSESSOR**	**LEARNER/ CANDIDATE**	**ACTION**
The principles/criteria for good assessment were achieved?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment related to the registered unit standard?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment was practical?	☐Agree ☐Disagree	☐Agree ☐Disagree	
It was time efficient and cost-effective and did not interfere with my normal responsibilities?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment instruments were fair, clear and understandable	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment judgements was made against set requirements	☐Agree ☐Disagree	☐Agree ☐Disagree	
The venue and equipment was functional?	☐Agree ☐Disagree	☐Agree ☐Disagree	
Special needs were identified and the assessment plan was adjusted	☐Agree ☐Disagree	☐Agree ☐Disagree	
Feedback was constructive against the evidence required	☐Agree ☐Disagree	☐Agree ☐Disagree	
An opportunity to appeal was given	☐Agree ☐Disagree	☐Agree ☐Disagree	
The evidence was recorded	☐Agree ☐Disagree	☐Agree ☐Disagree	

LEARNER'S DECLARATION OF UNDERSTANDING		
I am aware of the moderation process and understand that the moderator could declare the assessment decision invalid		
Learner Date	**Assessor Date**	**Moderator Date**

Assessor Review

Assessors must review the assessment process by completing this document. Please attach any additional information if required.

Evaluation Criteria	**YES**	**NO**
Was the assessment preparation adequate?		
Was the learner informed of the assessment and policies?		
Design/prepare the assessment tools & - documentation according to ETQA and company QMS correct?		
Integration into work or learning: Was the assessment as unobtrusive as possible?		
Was maximum use made of naturally occurring events & readily available evidence?		
Systematic Process: Was the assessment process properly planned & structured?		
Involvement of the learner: Was the learner involved throughout the assessment process?		
Did the learners contribute to the planning of assessment & the collection of evidence?		
Open: Did the learners understand the assessment process and the criteria, which apply?		
Environment: A supportive, non-threatening environment is created for assessment.		
Was the assessment Valid?		
Was the assessment Reliable?		
Was the assessment Consistent?		
Was the assessment Authentic?		
Was the assessment Sufficient?		
Was the assessment Current?		
Was the feedback given?		
Completed the result of the assessment according to the requirements of the organization and/or employer, as well as the relevant ETQA.		
Records & assessment instruments have to be kept for quality assurance purposes, as well as possible appeals.		
What did you as assessor do well?		

What did you as assessor not do well?	
Did you identify any weaknesses in the design of the assessment? If so, suggest improvements	
Quality of the unit standard: is it fit for the purpose it was designed for? If not, please make suggestions for improvements	
Additional comments	
Assessor signature	Date

Candidate Feedback Report

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	7480 Demonstrate understanding of rational and irrational numbers and number systems		

Assessment Decision			
Source of Evidence	C	NYC	Comments
Assessments			
Product			
Indirect Evidence			
Overall Assessment Decision			
Additional Notes			
Date			
Signature of Assessor			Signature of Candidate

Candidate Appeal Form

Candidate's Name:		ID No.	
Assessor's Name:		Reg. No.	
Unit Standard Title:	7480 Demonstrate understanding of rational and irrational numbers and number systems		
Date:			
SECTION 1			
Candidate's reason for disagreeing with the assessment decision			
Assessor's rationale for the assessment decision			
Candidate's signature			
Assessor's signature			

SECTION 2	
Internal Moderator's reconsidered decision and rationale	
Internal Moderator's Signature	
Advising Assessor's Signature	
Decision and rationale of the investigatory panel	
Learner Declaration	The above decisions have been explained to me and I accept the assessment decision
Learner's Signature	
Date	

Please send this form to: The Training Provider

Assessor's Report 7480

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	7480 Demonstrate understanding of rational and irrational numbers and number systems		

ASSESSMENT DECISION

Specific Outcome	C	NYC	Comments
Use and analyse computational tools and strategies, and make estimates and approximations.			
Demonstrate understanding of numbers and relationships among numbers and number systems.			
Overall Assessment Decision			
Comments			
Date			

Signature of Assessor	Signature of Candidate

Moderator's Report 7480

Moderator's Name		Reg. No.	
Assessor's Name		Reg. No.	
Candidate's Name		ID No.	
Unit Standard Title	7480 Demonstrate understanding of rational and irrational numbers and number systems		

MODERATION DECISION

Specific Outcome	C	NYC	Comments
Use and analyse computational tools and strategies, and make estimates and approximations.			
Demonstrate understanding of numbers and relationships among numbers and number systems.			

Overall Moderation Decision	
Feedback to Assessor	
Action Required	
Date of Moderation	

Signature of Moderator	
Signature of Assessor	
Signature of Candidate	

Agreed Assessment Plan 9008

Candidate's Name:			
Assessor's Name:			
Unit Standard Title:	9008 Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts		
Special Assessment Requirements			
Event	**Date, time and location**	**Resources required**	**Evidence to be generated**
Attend Training		Training material, Facilitator	Attendance Register
Complete assessments		Assessments	Completed Assessments
Complete Portfolio of Evidence		Portfolio of Evidence guide	Completed Portfolio of Evidence
Submit Portfolio of Evidence to Training provider			Acknowledgement of receipt from Training provider
Assessor roles and responsibility			
Roles	❖ Assessor ❖ Guide ❖ Feedback Agent ❖ Reviewer		
Responsibilities	❖ Consult candidate re assessment, assessment process and plan ❖ Agree assessment process and plan with candidate ❖ Forward documentation to candidate: plan, guide and assessment instruments ❖ Assess candidate with the use of different instruments ❖ Provide feedback on assessment findings ❖ Support candidate through assessment process ❖ Source feedback from candidate on assessment process ❖ Review assessment process and outcome ❖ Use assessment process as opportunity to transform assessment activities and outcomes		

Candidate roles and responsibility	
Roles	❖ Candidate ❖ Feedback agent ❖ Reviewer
Responsibilities	❖ Be available for assessment ❖ Be actively involved in the consultative process ❖ Learn from the assessment process ❖ Provide feedback to the assessor in terms of the assessment as learning activity ❖ Provide feedback to the assessor on the efficacy of the assessment process ❖ Review own role and assessor role in the assessment process
Assessment Instruments	❖ Portfolio of evidence ❖ Work sample ❖ Observation

Assessment Process	
Step	**Date**
❖ Evaluation of POE addressing Essential Embedded Knowledge in unit standards ❖ Evaluation of Research Projects and other evidence address specific unit standards ❖ Consultation: assessment plan and assessment activities and instruments. Pre-assessment moderation and interviews conducted at this stage ❖ Observation: feedback on assessment against specific outcomes, critical outcomes and constructs in unit standards ❖ Feedback: to candidate regarding sufficiency of evidence and possible interview to gain supplementary evidence ❖ Feedback to candidate regarding assessment findings as well as review process	
Feedback	Written feedback to be given to all stakeholders at the end of the assessment process, as well as verbal feedback to the candidate during assessment activities
Recording Process	Process and findings to be recorded and submitted for record keeping purposes as well as moderation and verification
Review Process	The review process is the responsibility of the assessor and the candidate. Joint reviewing will take place after feedback has been given to the candidate
Right to appeal	The candidate must be advised of the right to appeal

	Step	Date
Accessibility and safety of environment	❖ Site inspection conducted ❖ Pre-assessment moderation conducted	
Resources Required	❖ Assignments ❖ POE ❖ Assessments	

I confirm that:

I have been consulted on and have agreed to the training and assessment process as detailed in the assessment guide

I have been advised of my right to appeal against any assessment that is unfair, unreliable, invalid or impracticable

I have read and understood the appeal procedure

I know that assessments may be moderated or verified by an external party

The purpose of the assessment has been clearly explained to me

The criteria have been discussed with me, and I know I will be assessed against these criteria

I know when and where I will be assessed, and I was given fair notice

I know how the assessment will be done, and any other requirements related to the assessment

I am ready to be assessed

Signed: _____ **Date:** _____

_____

Overall Assessment Decision	Competent	Not yet competent	
Candidate's Signature		**Date**	
Assessor's Signature		**Date**	
Moderator's Signature		**Date**	

UNIT STANDARD 9008

Unit Standard Title

Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts

NQF Level

2

Credits

3

Purpose

This unit standard is designed to provide credits towards the mathematical literacy requirements of the NQF at level 2. The essential purposes of the mathematical literacy requirements are that, as the learner progresses with confidence through the levels, the learner will grow in:

- An insightful use of mathematics in the management of the needs of everyday living to become a self-managing person.
- An understanding of mathematical applications that provides insight into the learner's present and future occupational experiences and so develop into a contributing worker.
- The ability to voice a critical sensitivity to the role of mathematics in a democratic society and so become a participating citizen

Learning Assumptions

The credit value is based on the assumption that people starting to learn towards this unit standard are competent in Mathematics and Communications at NQF level 1.

Range

The scope of this unit standard includes symmetry, transformations; making conjectures; measurement in practical situations and calculations involving plane figures. Situations should preferably be related to the teenager, peer groups and the school or work community. More detailed range statements are provided for specific outcomes and assessment criteria as needed.

Specific Outcomes and Assessment Criteria

Specific outcome 1: Estimate, measure and calculate physical quantities to solve problems in practical situations

Range:

- Basic instruments to include those readily available such as rulers, measuring tapes, measuring cylinders or jugs, thermometers, spring or kitchen balances, watches and clocks
- Quantities to estimate or measure to include length, mass, time and temperature
- The quantities should range from the low or small to the high or large
- Mass, volume and temperature values are used in practical situations relevant to learners or the workplace
- Calculate lengths using Pythagoras` theorem
- Calculate perimeters and areas of rectangles, parallelograms, circles, trapesia, from measurements in practical situations
- Use rough sketches to interpret represent and describe situations

- Use and interpret scale drawings of plans (e.g., teenager rooms, factory floors; in painting walls, designing gardens)
- SI units to be used but conversions from imperial to SI included

Assessment criteria

- Scales on the measuring instruments are read correctly
- Quantities are estimated to a tolerance acceptable in the context of the estimation
- The appropriate instrument is chosen to measure a particular quantity
- Calculations are carried out correctly
- Appropriate units are used in measurement and calculation
- Rough sketches are interpreted or used correctly to represent and describe situations
- Scales are used correctly in interpreting and describing situations through scale diagrams

Specific outcome 2: Explore transformations of two-dimensional geometric figures

Range:

- Use parallelism, symmetry, translation, reflection and rotation in describing artefacts
- Make conjectures about mathematical relationships found in artefacts
- Use transformations and symmetry in describing objects
- Use transformations and symmetry in designing patterns in 2 dimensions (e.g., tessellations, dress material, logos) of interest to teenagers

Assessment criteria

- Properties of symmetrical shapes are recognised and described
- The concept of lines of symmetry in 2-dimensional figures is explored using paper folding and reflections in the lines of symmetry
- The concept of transformation in terms of reflections, translations and rotations is identified and explained using concrete materials
- The descriptions are based on correct application of transformations and other geometrical properties
- Designs, based on transformations and other geometrical properties are innovative, and correct geometrically

Essential embedded knowledge

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that the possession or lack of the knowledge can be inferred directly from the quality of the candidate's performance against the standards.

- Properties of geometric shapes
- Length, area, mass, temperature, time
- Scale drawing

Critical cross field outcomes

- Identify and solve problems using critical and creative thinking: Solve a variety of problems relevant to the learner involving physical quantities and time using geometrical techniques.
- Collect, analyse, organise and critically evaluate information: Gather, organise, and interpret information about objects and processes.
- Communicate effectively: Use everyday language and mathematical language and drawing or geometrical diagrams to describe geometric and other physical properties, and processes relevant to the learner and the workplace
- Use mathematics: Use mathematics to describe and represent realistic situations and to solve practical problems

Formative Assessments

During your training, you were required to complete a number of activities within each Lesson in your Learner Study Guide. You need to complete these activities and attach the evidence of each in this section of your PoE.

Summative Assessment Readiness Statement

Note: **R = Ready** for summative assessment. **NYR = Not Yet Ready** for summative assessment

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9008 Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts		

ASSESSMENT DECISION			
Specific Outcome	R	NYR	Comments
Estimate, measure and calculate physical quantities to solve problems in practical situations			
Explore transformations of two-dimensional geometric figures			

Assessor's / Facilitator's Declaration:

I hereby declare that I have assessed the learner's formative assessment and find the learner ready / not yet ready for the summative assessment

Assessor / Facilitator Name	Signature

SUMMATIVE ASSESSMENTS

Knowledge Questionnaire 9008

1. How do we measure length? (4)

We measure lengths in millimetres (mm), (1) centimetres (cm) (1) meters (m) (1)
and kilometres (km) (1)

2. On a typical ruler what would be the smallest increment to be distinguished? (1)

1 millimetre

3. What type of instrument would be used to measure the length of a curtain rail? (1)

Tape measure

4. How do we measure mass? (2)

we use the gram (g) and the kilogram (kg) as units of mass

5. How do we measure fluids such as water, milk and cold drinks (1)

millilitres or litres

6. What is the basic unit of time? (1)

The basic unit of time is the second (s)

7. What is a thermometer used for? (1)

A thermometer is an instrument for measuring or sensing temperature

8. List the important elements that must be displayed on a rough sketch. (8)

The direction north always pointing towards the top or at least like on a clock 10 to 2
or 10 past 10.
The title "Rough sketch" on top of the drawing.
The name of streets or buildings clearly displayed.
Alphabetical numbering of critical elements on or at the scene if you are sketching a
crime scene or incident scene.
The name of the person drawing the sketch.

The date and time of the sketch.
Clear indication of grass, road surfaces and any other information that may assist the
user of the sketch.
Signature of the originator.

9. What is a scale drawing? (1)

A scale drawing is a reduced or enlarged drawing of an original but it is drawn true to
scale

TOTAL: 20

Practical Workplace Logbook

Attach the completed workplace logbook and workbook behind this page

Acknowledgment of Receipt

I _____

(Learner) acknowledge receipt of my Workplace assignment workbook on this the

_____ day of _____ 20_____

The process of on-the-job training has been explained to me.

_____

Signature of Learner

_____

Name of Facilitator/Mentor/Supervisor:

_____

Signature of Facilitator/Mentor/Supervisor

Indirect Evidence

Indirect Evidence is evidence produced about the learner from another source. This is usually in the form of reports of third party sources, i.e. sources other than the assessor.

Indirect evidence can be used to verify the authenticity of other forms of evidence. In addition, it may be necessary to corroborate these forms of evidence.

Sources of indirect evidence include:

- Team outputs
- Work completed at an earlier stage
- Performance appraisals
- Training records
- Testimonials
- Reviews and commendations
- Certificates and qualifications
- Medals, prizes and trophies
- Customer / client ratings

Please attach any indirect evidence you may have on the required outcomes within the PoE behind this page.

Declaration Of Authenticity Of Evidence

I (Initials and Surname)	
ID No:	
declare/certify that the learning activities completed in the Learner Activity Workbook in its entirety is my own original and authentic work (interpreter declaration to be completed where necessary) I acknowledge that should it come to the attention/reported to the Training Provider/ SETA or relevant authorities, and there is sufficient evidence to prove that there is an irregularity regarding the authenticity of this submission the necessary steps will be taken against me which can result in one or more of the following decisions being taken:	
A criminal case being opened, Learner achievement certificate cancelled, withdrawn Non processing of Learner Achievement submissions to the SETA pending the outcome of an investigation De-registration as an Assessor/Moderator (where unauthorised assistance is provided by the Assessor/Facilitator) Investigation into the accreditation status of the Training Provider if there is an irregularity on the part of the Training Provider	
I know and understand the contents of this declaration: I have no objection to signing the prescribed declaration. The declaration was also explained to me by the Training Provider/Facilitator	
Signature of Learner:	Date
Signature of Facilitator/Assessor:	Date

Evidence Locator & Sign-off 9008

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 9008	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO1: Estimate, measure and calculate physical quantities to solve problems in practical situations				
SO1, AC1 Scales on the measuring instruments are read correctly	Knowledge Questionnaire Assignment 3			
SO1, AC2 Quantities are estimated to a tolerance acceptable in the context of the estimation	Knowledge Questionnaire Assignment 3			
SO1, AC3 The appropriate instrument is chosen to measure a particular quantity	Knowledge Questionnaire Assignment 3			
SO1, AC4 Calculations are carried out correctly	Knowledge Questionnaire Assignment 3			
SO1, AC5 Appropriate units are used in measurement and calculation	Knowledge Questionnaire Assignment 3			
SO1, AC6 Rough sketches are interpreted or used correctly to represent and describe situations	Knowledge Questionnaire Assignment 3			
SO1, AC7 Scales are used correctly in interpreting and describing situations through scale diagrams	Knowledge Questionnaire Assignment 3			
SO2: Explore transformations of two-dimensional geometric figures				

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 9008	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO2, AC1 Properties of symmetrical shapes are recognised and described	Knowledge Questionnaire Assignment 4			
SO2, AC2 The concept of lines of symmetry in 2-dimensional figures is explored using paper folding and reflections in the lines of symmetry	Knowledge Questionnaire Assignment 4			
SO2, AC3 The concept of transformation in terms of reflections, translations and rotations is identified and explained using concrete materials	Knowledge Questionnaire Assignment 4			
SO2, AC4 The descriptions are based on correct application of transformations and other geometrical properties	Knowledge Questionnaire Assignment 4			
SO2, AC5 Designs, based on transformations and other geometrical properties are innovative, and correct geometrically	Knowledge Questionnaire Assignment 4			

Record of Learning

Candidate's Name:	ID No	
Assessor's Name:	Ass. Reg. No	
Moderator's Name:	Mod. Reg. No	
Date:		

UNIT STANDARD	NQF LEVEL	CREDITS	DATE OF COMPLETION	SIGNATURE OF ASSESSOR	SIGNATURE OF MODERATOR
9008	2	3			

ASSESSMENT REVIEW

NAME of LEARNER	**NAME of ASSESSOR**
VENUE	**DATE of REVIEW**
UNIT STANDARD	9008 Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts

Review Dimension	**ASSESSOR**	**LEARNER/ CANDIDATE**	**ACTION**
The principles/criteria for good assessment were achieved?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment related to the registered unit standard?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment was practical?	☐Agree ☐Disagree	☐Agree ☐Disagree	
It was time efficient and cost-effective and did not interfere with my normal responsibilities?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment instruments were fair, clear and understandable	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment judgements was made against set requirements	☐Agree ☐Disagree	☐Agree ☐Disagree	
The venue and equipment was functional?	☐Agree ☐Disagree	☐Agree ☐Disagree	
Special needs were identified and the assessment plan was adjusted	☐Agree ☐Disagree	☐Agree ☐Disagree	
Feedback was constructive against the evidence required	☐Agree ☐Disagree	☐Agree ☐Disagree	
An opportunity to appeal was given	☐Agree ☐Disagree	☐Agree ☐Disagree	
The evidence was recorded	☐Agree ☐Disagree	☐Agree ☐Disagree	

LEARNER'S DECLARATION OF UNDERSTANDING

I am aware of the moderation process and understand that the moderator could declare the assessment decision invalid

Learner Date	**Assessor Date**	**Moderator Date**

Assessor Review

Assessors must review the assessment process by completing this document. Please attach any additional information if required.

Evaluation Criteria	**YES**	**NO**
Was the assessment preparation adequate?		
Was the learner informed of the assessment and policies?		
Design/prepare the assessment tools & - documentation according to ETQA and company QMS correct?		
Integration into work or learning: Was the assessment as unobtrusive as possible?		
Was maximum use made of naturally occurring events & readily available evidence?		
Systematic Process: Was the assessment process properly planned & structured?		
Involvement of the learner: Was the learner involved throughout the assessment process?		
Did the learners contribute to the planning of assessment & the collection of evidence?		
Open: Did the learners understand the assessment process and the criteria, which apply?		
Environment: A supportive, non-threatening environment is created for assessment.		
Was the assessment Valid?		
Was the assessment Reliable?		
Was the assessment Consistent?		
Was the assessment Authentic?		
Was the assessment Sufficient?		
Was the assessment Current?		
Was the feedback given?		
Completed the result of the assessment according to the requirements of the organization and/or employer, as well as the relevant ETQA.		
Records & assessment instruments have to be kept for quality assurance purposes, as well as possible appeals.		
What did you as assessor do well?		

What did you as assessor not do well?	
Did you identify any weaknesses in the design of the assessment? If so, suggest improvements	
Quality of the unit standard: is it fit for the purpose it was designed for? If not, please make suggestions for improvements	
Additional comments	
Assessor signature	Date

Candidate Feedback Report

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9008 Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts		

Assessment Decision			
Source of Evidence	C	NYC	Comments
Assessments			
Product			
Indirect Evidence			
Overall Assessment Decision			
Additional Notes			
Date			
Signature of Assessor			Signature of Candidate

Candidate Appeal Form

Candidate's Name:		ID No.	
Assessor's Name:		Reg. No.	
Unit Standard Title:	9008 Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts		
Date:			
SECTION 1			
Candidate's reason for disagreeing with the assessment decision			
Assessor's rationale for the assessment decision			
Candidate's signature			
Assessor's signature			

SECTION 2	
Internal Moderator's reconsidered decision and rationale	
Internal Moderator's Signature	
Advising Assessor's Signature	
Decision and rationale of the investigatory panel	
Learner Declaration	The above decisions have been explained to me and I accept the assessment decision
Learner's Signature	
Date	

Please send this form to: The Training Provider

Assessor's Report 9008

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9008 Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts		

ASSESSMENT DECISION

Specific Outcome	C	NYC	Comments
Estimate, measure and calculate physical quantities to solve problems in practical situations			
Explore transformations of two-dimensional geometric figures			
Overall Assessment Decision			
Comments			
Date			

Signature of Assessor	Signature of Candidate

Moderator's Report 9008

Moderator's Name		Reg. No.	
Assessor's Name		Reg. No.	
Candidate's Name		ID No.	
Unit Standard Title	9008 Identify, describe, compare, classify, explore shape and motion in 2- and 3-dimensional shapes in different contexts		

MODERATION DECISION

Specific Outcome	C	NYC	Comments
Estimate, measure and calculate physical quantities to solve problems in practical situations			
Explore transformations of two-dimensional geometric figures			

Overall Moderation Decision	
Feedback to Assessor	
Action Required	
Date of Moderation	

Signature of Moderator	
Signature of Assessor	
Signature of Candidate	

Agreed Assessment Plan 9007

Candidate's Name:			
Assessor's Name:			
Unit Standard Title:	9007 Work with a range of patterns and functions and solve problems		
Special Assessment Requirements			
Event	**Date, time and location**	**Resources required**	**Evidence to be generated**
Attend Training		Training material, Facilitator	Attendance Register
Complete assessments		Assessments	Completed Assessments
Complete Portfolio of Evidence		Portfolio of Evidence guide	Completed Portfolio of Evidence
Submit Portfolio of Evidence to Training provider			Acknowledgement of receipt from Training provider
Assessor roles and responsibility			
Roles	❖ Assessor ❖ Guide ❖ Feedback Agent ❖ Reviewer		
Responsibilities	❖ Consult candidate re assessment, assessment process and plan ❖ Agree assessment process and plan with candidate ❖ Forward documentation to candidate: plan, guide and assessment instruments ❖ Assess candidate with the use of different instruments ❖ Provide feedback on assessment findings ❖ Support candidate through assessment process ❖ Source feedback from candidate on assessment process ❖ Review assessment process and outcome ❖ Use assessment process as opportunity to transform assessment activities and outcomes		

Candidate roles and responsibility	
Roles	❖ Candidate ❖ Feedback agent ❖ Reviewer
Responsibilities	❖ Be available for assessment ❖ Be actively involved in the consultative process ❖ Learn from the assessment process ❖ Provide feedback to the assessor in terms of the assessment as learning activity ❖ Provide feedback to the assessor on the efficacy of the assessment process ❖ Review own role and assessor role in the assessment process
Assessment Instruments	❖ Portfolio of evidence ❖ Work sample ❖ Observation

Assessment Process	
Step	**Date**
❖ Evaluation of POE addressing Essential Embedded Knowledge in unit standards ❖ Evaluation of Research Projects and other evidence address specific unit standards ❖ Consultation: assessment plan and assessment activities and instruments. Pre-assessment moderation and interviews conducted at this stage ❖ Observation: feedback on assessment against specific outcomes, critical outcomes and constructs in unit standards ❖ Feedback: to candidate regarding sufficiency of evidence and possible interview to gain supplementary evidence ❖ Feedback to candidate regarding assessment findings as well as review process	
Feedback	Written feedback to be given to all stakeholders at the end of the assessment process, as well as verbal feedback to the candidate during assessment activities
Recording Process	Process and findings to be recorded and submitted for record keeping purposes as well as moderation and verification
Review Process	The review process is the responsibility of the assessor and the candidate. Joint reviewing will take place after feedback has been given to the candidate
Right to appeal	The candidate must be advised of the right to appeal

	Step	Date
Accessibility and safety of environment	❖ Site inspection conducted ❖ Pre-assessment moderation conducted	
Resources Required	❖ Assignments ❖ POE ❖ Assessments	

I confirm that:

I have been consulted on and have agreed to the training and assessment process as detailed in the assessment guide

I have been advised of my right to appeal against any assessment that is unfair, unreliable, invalid or impracticable

I have read and understood the appeal procedure

I know that assessments may be moderated or verified by an external party

The purpose of the assessment has been clearly explained to me

The criteria have been discussed with me, and I know I will be assessed against these criteria

I know when and where I will be assessed, and I was given fair notice

I know how the assessment will be done, and any other requirements related to the assessment

I am ready to be assessed

Signed: _____ **Date:** _____

_____

Overall Assessment Decision	Competent	Not yet competent	
Candidate's Signature		**Date**	
Assessor's Signature		**Date**	
Moderator's Signature		**Date**	

UNIT STANDARD 9007

Unit Standard Title

Work with a range of patterns and functions and solve problems

NQF Level

2

Credits

5

Purpose

This unit standard is designed to provide credits towards the mathematical literacy requirements of the NQF at level 2. The essential purposes of the mathematical literacy requirements are that, as the learner progresses with confidence through the levels, the learner will grow in:

- An insightful use of mathematics in the management of the needs of everyday living to become a self-managing person
- An understanding of mathematical applications that provides insight into the learner's present and future occupational experiences and so develop into a contributing worker
- The ability to voice a critical sensitivity to the role of mathematics in a democratic society and so become a participating citizen.

Learning Assumptions

The credit value is based on the assumption that people starting to learn towards this unit standard are competent in Mathematics and Communications at NQF level 1

Range

This unit standard includes the requirement to:

- Use algebraic notation to express generality
- Make conjectures, demonstrate and explain their validity
- Recognise equivalence among expressions and situations resulting from manipulation and rearrangement to forms appropriate for solving problems

Work with:

- Functions for which there are rules and for which there are no rules;
- Functions that are discrete (rules and no rules);
- Functions that are continuous (rules and no rules).

Investigate, and interpret graphs of situations with regard to the following: increasing/decreasing,

- Maximal /minimal,
- Continuous / discrete,
- Rate of change,
- Intercepts,
- Interpolation /extrapolation.

(The above must be done in relation to the contexts in which the functions are acting as models.)

Work with the following basic functions: y =ax +b; y =LIX*+b; y =ax; xy=k, In terms of their:

- Shape and symmetry,
- Finding function values,
- Finding input values,
- Analysing the behaviour of function values (the rate of change).

Represent, interpret and solve problems that relate to these functions by using point-by-point plotting and numerical analysis

Convert flexibly among various representations of the above functions (i.e. words, tables, formulae, graphs).

Learners are not expected to master each concept and procedure when they first encounter it, but rather to continually develop their mathematical understandings through encounters with mathematical models of realistic situations.

The contexts and situations should be used to develop a critical awareness of human rights, social, economic, political, cultural and environmental issues. Examples of the power of modelling as a descriptive tool to describe situations between two variables and as an analytic tool to gain additional information about the situation must be developed.

Specific Outcomes and Assessment Criteria

Specific outcome 1: Convert flexibly between and within various representations of functions

Range: This outcome includes the requirement to:

- Translate from one representation to another (i.e. verbal, tables, formulae, graphs).
- Deal with situations involving the range of functions specified in the main range statement as well as functions for which there is no rule

Assessment criteria:

- Appropriate information is selected to convert flexibly between and within various representations of functions
- Appropriate representations are selected for specific applications
- Conversions represent the functions accurately and appropriately

Specific outcome 2: Compare, analyse and describe the behaviour of patterns and functions

Range: This outcome includes the requirement to work with functions:

- Identify, contrast and compare the features of the functions listed in the main range statement as well as functions for which there are no rules
- Recognise equivalent forms of an expression, equation or function

Assessment criteria

- Patterns and functions are compared in terms of: Shape and symmetry, Finding function values, Finding input values, The average rate of change of function values.
- The key features of the graphs of functions are described and interpreted correctly.
- The behaviour of functions is described as being increasing or decreasing or constant as determined visually from graphical representations.

Specific outcome 3: Represent situations mathematically in order to interpret and solve problems.

Range: This outcome includes the requirement to:

- Use expressions, functions and equations to represent situations
- Develop strategies for deciding whether symbolic, representations are reasonable and interpret such results

Assessment criteria

- Accurate point-by-point plotting is used to model contextual problems
- Representations are analysed and manipulated efficiently in arriving at results.
- Representations are verified in terms of available data
- Results are interpreted correctly in terms of the situation
- Interpretations and predictions are based on the properties of the mathematical model

Essential embedded knowledge

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that the possession or lack of the knowledge can be inferred directly from the quality of tile candidate's performance against the standards.

- Relationships between variables
- Mathematical functions
- Representations of functions and relations

Critical cross field outcomes

- Identify and solve problems using critical and creative thinking: Solve a variety of problems based on patterns and functions
- Collect, analyse, organise and critically evaluate information: Gather, organise, evaluate and interpret information to compare and represent relationships and functions
- Communicate effectively: Use everyday language and mathematical language to describe relationships, processes and problem solving methods
- Use mathematics: Use mathematics to, describe and represent realistic and abstract situations and to solve problems.

Formative Assessments

During your training, you were required to complete a number of activities within each Lesson in your Learner Study Guide. You need to complete these activities and attach the evidence of each in this section of your PoE.

Summative Assessment Readiness Statement

Note: **R = Ready** for summative assessment. **NYR = Not Yet Ready** for summative assessment

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9007 Work with a range of patterns and functions and solve problems		

ASSESSMENT DECISION			
Specific Outcome	R	NYR	Comments
Convert flexibly between and within various representations of functions			
Compare, analyse and describe the behaviour of patterns and functions			
Represent situations mathematically in order to interpret and solve problems			

Assessor's / Facilitator's Declaration:

I hereby declare that I have assessed the learner's formative assessment and find the learner ready / not yet ready for the summative assessment

Assessor / Facilitator Name	Signature

SUMMATIVE ASSESSMENTS

Knowledge Questionnaire 9007

1. Explain a formula (1)

A formula is a relationship between quantities

2. Explain a function (3)

The mathematical concept of a function expresses dependence between two quantities, one of which is given (the independent variable, argument of the function, or its "input") and the other produced (the dependent variable, value of the function, or "output").

3. What is an argument of a function? (1)

A specific input in a function is called an argument of the function

4. What is the graph of a function f? (1)

In mathematics, the graph of a function f is the collection of all ordered pairs (x,f(x)).

5. Explain the Cartesian coordinate system (6)

In two dimensions, this system consists of a pair of lines on a flat surface (or plane) that intersect at right angles.
Each of the lines is called an axis and the point at which they intersect is called the origin.
The axes are usually drawn horizontally and vertically and are usually referred to as the x and y axes, respectively.

6. Explain the theorem of Pythagoras (4)

The theorem of Pythagoras states the following:

In any right-angled triangle the following is true:
The square of the hypotenuse is equal to the sum of the squares of the other two sides $(AC)^2 = (AB)^2 + (BC)^2$

TOTAL: 16

Practical Workplace Logbook

Attach the completed workplace logbook and workbook behind this page

Acknowledgment of Receipt

I _____

(Learner) acknowledge receipt of my Workplace assignment workbook on this the

_____ day of _____ 20_____

The process of on-the-job training has been explained to me.

_____

Signature of Learner

_____

Name of Facilitator/Mentor/Supervisor:

_____

Signature of Facilitator/Mentor/Supervisor

Indirect Evidence

Indirect Evidence is evidence produced about the learner from another source. This is usually in the form of reports of third party sources, i.e. sources other than the assessor.

Indirect evidence can be used to verify the authenticity of other forms of evidence. In addition, it may be necessary to corroborate these forms of evidence.

Sources of indirect evidence include:

- Team outputs
- Work completed at an earlier stage
- Performance appraisals
- Training records
- Testimonials
- Reviews and commendations
- Certificates and qualifications
- Medals, prizes and trophies
- Customer / client ratings

Please attach any indirect evidence you may have on the required outcomes within the PoE behind this page.

Declaration Of Authenticity Of Evidence

I (Initials and Surname)	
ID No:	
declare/certify that the learning activities completed in the Learner Activity Workbook in its entirety is my own original and authentic work (interpreter declaration to be completed where necessary) I acknowledge that should it come to the attention/reported to the Training Provider/ SETA or relevant authorities, and there is sufficient evidence to prove that there is an irregularity regarding the authenticity of this submission the necessary steps will be taken against me which can result in one or more of the following decisions being taken:	
A criminal case being opened, Learner achievement certificate cancelled, withdrawn Non processing of Learner Achievement submissions to the SETA pending the outcome of an investigation De-registration as an Assessor/Moderator (where unauthorised assistance is provided by the Assessor/Facilitator) Investigation into the accreditation status of the Training Provider if there is an irregularity on the part of the Training Provider	
I know and understand the contents of this declaration: I have no objection to signing the prescribed declaration. The declaration was also explained to me by the Training Provider/Facilitator	
Signature of Learner:	Date
Signature of Facilitator/Assessor:	Date

Evidence Locator & Sign-off 9007

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 9007	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO1: Convert flexibly between and within various representations of functions				
SO1, AC1 Appropriate information is selected to convert flexibly between and within various representations of functions	Knowledge Questionnaire Assignment 5			
SO1, AC2 Appropriate representations are selected for specific applications	Knowledge Questionnaire Assignment 5			
SO1, AC3 Conversions represent the functions accurately and appropriately	Knowledge Questionnaire Assignment 5			
SO2: Compare, analyse and describe the behaviour of patterns and functions				
SO2, AC1 Patterns and functions are compared in terms of: Shape and symmetry, Finding function values, Finding input values, The average rate of change of function values	Knowledge Questionnaire Assignment 5			
SO2, AC2 The key features of the graphs of functions are described and interpreted correctly	Knowledge Questionnaire Assignment 5			
SO2, AC3 The behaviour of functions is described as being increasing or decreasing or constant as determined visually from graphical representations	Knowledge Questionnaire Assignment 5			

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 9007	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO3: Represent situations mathematically in order to interpret and solve problems				
SO3, AC1 Accurate point-by-point plotting is used to model contextual problems	Knowledge Questionnaire Assignment 5			
SO3, AC2 Representations are analysed and manipulated efficiently in arriving at results	Knowledge Questionnaire Assignment 5			
SO3, AC3 Representations are verified in terms of available data	Knowledge Questionnaire Assignment 5			
SO3, AC4 Results are interpreted correctly in terms of the situation	Knowledge Questionnaire Assignment 5			
SO3, AC5 Interpretations and predictions are based on the properties of the mathematical model	Knowledge Questionnaire Assignment 5			

Record of Learning

Candidate's Name:	ID No	
Assessor's Name:	Ass. Reg. No	
Moderator's Name:	Mod. Reg. No	
Date:		

UNIT STANDARD	NQF LEVEL	CREDITS	DATE OF COMPLETION	SIGNATURE OF ASSESSOR	SIGNATURE OF MODERATOR
9007	2	5			

ASSESSMENT REVIEW

NAME of LEARNER	**NAME of ASSESSOR**
VENUE	**DATE of REVIEW**
UNIT STANDARD	9007 Work with a range of patterns and functions and solve problems

Review Dimension	**ASSESSOR**	**LEARNER/ CANDIDATE**	**ACTION**
The principles/criteria for good assessment were achieved?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment related to the registered unit standard?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment was practical?	☐Agree ☐Disagree	☐Agree ☐Disagree	
It was time efficient and cost-effective and did not interfere with my normal responsibilities?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment instruments were fair, clear and understandable	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment judgements was made against set requirements	☐Agree ☐Disagree	☐Agree ☐Disagree	
The venue and equipment was functional?	☐Agree ☐Disagree	☐Agree ☐Disagree	
Special needs were identified and the assessment plan was adjusted	☐Agree ☐Disagree	☐Agree ☐Disagree	
Feedback was constructive against the evidence required	☐Agree ☐Disagree	☐Agree ☐Disagree	
An opportunity to appeal was given	☐Agree ☐Disagree	☐Agree ☐Disagree	
The evidence was recorded	☐Agree ☐Disagree	☐Agree ☐Disagree	

LEARNER'S DECLARATION OF UNDERSTANDING		
I am aware of the moderation process and understand that the moderator could declare the assessment decision invalid		
Learner Date	**Assessor Date**	**Moderator Date**

Assessor Review

Assessors must review the assessment process by completing this document. Please attach any additional information if required.

Evaluation Criteria	**YES**	**NO**
Was the assessment preparation adequate?		
Was the learner informed of the assessment and policies?		
Design/prepare the assessment tools & - documentation according to ETQA and company QMS correct?		
Integration into work or learning: Was the assessment as unobtrusive as possible?		
Was maximum use made of naturally occurring events & readily available evidence?		
Systematic Process: Was the assessment process properly planned & structured?		
Involvement of the learner: Was the learner involved throughout the assessment process?		
Did the learners contribute to the planning of assessment & the collection of evidence?		
Open: Did the learners understand the assessment process and the criteria, which apply?		
Environment: A supportive, non-threatening environment is created for assessment.		
Was the assessment Valid?		
Was the assessment Reliable?		
Was the assessment Consistent?		
Was the assessment Authentic?		
Was the assessment Sufficient?		
Was the assessment Current?		
Was the feedback given?		
Completed the result of the assessment according to the requirements of the organization and/or employer, as well as the relevant ETQA.		
Records & assessment instruments have to be kept for quality assurance purposes, as well as possible appeals.		
What did you as assessor do well?		

What did you as assessor not do well?	
Did you identify any weaknesses in the design of the assessment? If so, suggest improvements	
Quality of the unit standard: is it fit for the purpose it was designed for? If not, please make suggestions for improvements	
Additional comments	
Assessor signature	Date

Candidate Feedback Report

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9007 Work with a range of patterns and functions and solve problems		

Assessment Decision			
Source of Evidence	C	NYC	Comments
Assessments			
Product			
Indirect Evidence			
Overall Assessment Decision			
Additional Notes			
Date			
Signature of Assessor			Signature of Candidate

Candidate Appeal Form

Candidate's Name:		ID No.	
Assessor's Name:		Reg. No.	
Unit Standard Title:	9007 Work with a range of patterns and functions and solve problems		
Date:			
SECTION 1			
Candidate's reason for disagreeing with the assessment decision			
Assessor's rationale for the assessment decision			
Candidate's signature			
Assessor's signature			

SECTION 2	
Internal Moderator's reconsidered decision and rationale	
Internal Moderator's Signature	
Advising Assessor's Signature	
Decision and rationale of the investigatory panel	
Learner Declaration	The above decisions have been explained to me and I accept the assessment decision
Learner's Signature	
Date	

Please send this form to: The Training Provider

Assessor's Report 9007

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9007 Work with a range of patterns and functions and solve problems		

ASSESSMENT DECISION

Specific Outcome	C	NYC	Comments
Convert flexibly between and within various representations of functions			
Compare, analyse and describe the behaviour of patterns and functions			
Represent situations mathematically in order to interpret and solve problems			
Overall Assessment Decision			
Comments			
Date			

Signature of Assessor	Signature of Candidate

Moderator's Report 9007

Moderator's Name		Reg. No.	
Assessor's Name		Reg. No.	
Candidate's Name		ID No.	
Unit Standard Title	9007 Work with a range of patterns and functions and solve problems		

MODERATION DECISION

Specific Outcome	C	NYC	Comments
Convert flexibly between and within various representations of functions			
Compare, analyse and describe the behaviour of patterns and functions			
Represent situations mathematically in order to interpret and solve problems			
Overall Moderation Decision			
Feedback to Assessor			
Action Required			
Date of Moderation			

Signature of Moderator	
Signature of Assessor	
Signature of Candidate	

Agreed Assessment Plan 7469

Candidate's Name:			
Assessor's Name:			
Unit Standard Title:	7469 Use mathematics to investigate and monitor the financial aspects of personal and community life		
Special Assessment Requirements			
Event	**Date, time and location**	**Resources required**	**Evidence to be generated**
Attend Training		Training material, Facilitator	Attendance Register
Complete assessments		Assessments	Completed Assessments
Complete Portfolio of Evidence		Portfolio of Evidence guide	Completed Portfolio of Evidence
Submit Portfolio of Evidence to Training provider			Acknowledgement of receipt from Training provider
Assessor roles and responsibility			
Roles	❖ Assessor ❖ Guide ❖ Feedback Agent ❖ Reviewer		
Responsibilities	❖ Consult candidate re assessment, assessment process and plan ❖ Agree assessment process and plan with candidate ❖ Forward documentation to candidate: plan, guide and assessment instruments ❖ Assess candidate with the use of different instruments ❖ Provide feedback on assessment findings ❖ Support candidate through assessment process ❖ Source feedback from candidate on assessment process ❖ Review assessment process and outcome ❖ Use assessment process as opportunity to transform assessment activities and outcomes		

Candidate roles and responsibility	
Roles	❖ Candidate ❖ Feedback agent ❖ Reviewer
Responsibilities	❖ Be available for assessment ❖ Be actively involved in the consultative process ❖ Learn from the assessment process ❖ Provide feedback to the assessor in terms of the assessment as learning activity ❖ Provide feedback to the assessor on the efficacy of the assessment process ❖ Review own role and assessor role in the assessment process
Assessment Instruments	❖ Portfolio of evidence ❖ Work sample ❖ Observation

Assessment Process	
Step	**Date**
❖ Evaluation of POE addressing Essential Embedded Knowledge in unit standards ❖ Evaluation of Research Projects and other evidence address specific unit standards ❖ Consultation: assessment plan and assessment activities and instruments. Pre-assessment moderation and interviews conducted at this stage ❖ Observation: feedback on assessment against specific outcomes, critical outcomes and constructs in unit standards ❖ Feedback: to candidate regarding sufficiency of evidence and possible interview to gain supplementary evidence ❖ Feedback to candidate regarding assessment findings as well as review process	
Feedback	Written feedback to be given to all stakeholders at the end of the assessment process, as well as verbal feedback to the candidate during assessment activities
Recording Process	Process and findings to be recorded and submitted for record keeping purposes as well as moderation and verification
Review Process	The review process is the responsibility of the assessor and the candidate. Joint reviewing will take place after feedback has been given to the candidate
Right to appeal	The candidate must be advised of the right to appeal

	Step	Date
Accessibility and safety of environment	❖ Site inspection conducted ❖ Pre-assessment moderation conducted	
Resources Required	❖ Assignments ❖ POE ❖ Assessments	

I confirm that:

I have been consulted on and have agreed to the training and assessment process as detailed in the assessment guide

I have been advised of my right to appeal against any assessment that is unfair, unreliable, invalid or impracticable

I have read and understood the appeal procedure

I know that assessments may be moderated or verified by an external party

The purpose of the assessment has been clearly explained to me

The criteria have been discussed with me, and I know I will be assessed against these criteria

I know when and where I will be assessed, and I was given fair notice

I know how the assessment will be done, and any other requirements related to the assessment

I am ready to be assessed

Signed: _____ **Date:** _____

_____

Overall Assessment Decision	Competent	Not yet competent	
Candidate's Signature		**Date**	
Assessor's Signature		**Date**	
Moderator's Signature		**Date**	

UNIT STANDARD 7469

Unit Standard Title

Use mathematics to investigate and monitor the financial aspects of personal and community life

NQF Level

2

Credits

2

Purpose

This unit standard will be useful to people who aim to achieve recognition at some level in Further Education and Training or to meet the Fundamental requirement of a wide range of qualifications registered on the National Qualifications Framework

Learning Assumptions

The credit value is based on the assumption that people starting to learn towards this unit standard are competent in Mathematics and Communications at NQF level 1

Range

Range statements are provided for specific outcomes and assessment criteria as needed

Specific Outcomes and Assessment Criteria

Specific outcome 1: Use mathematics to plan and control personal and/or household budgets and income and expenditure.

Assessment criteria

- Plans describe projected income and expenditure realistically.
- Calculations are carried out using computational tools efficiently and correctly and solutions obtained are verified in terms of the context.
- Budgets are presented in a manner that makes for easy monitoring and control.
- Actual income and expenditure are recorded accurately and in relation to planned income and expenditure. Variances are identified and explained and methods are provided for control.

Specific outcome 2: Use simple and compound interest to make sense of and define a variety of situations.

Range: Investments, stokvels, inflation, appreciation and depreciation

Assessment criteria

- The differences between simple and compound interest are described in terms of their common applications and effects.
- Methods of calculation are appropriate to the problem types.
- Computational tools are used efficiently and correctly and solutions obtained are verified in terms of the context or problem.
- Solutions to calculations are used effectively to define the changes over a period of time.

Essential embedded knowledge

The following essential embedded knowledge will be assessed by means of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that the possession or lack of the knowledge can be inferred directly from the quality of the candidate's performance against the standards.

- Budgets
- Terminology and definitions associated with financial situations.
- Estimation and approximation.
- Compound increase and decrease

Critical cross field outcomes

- Identify and solve problems using critical and creative thinking: Solving a variety of numerical and financial problems
- Collect, analyse, organise and critically evaluate information: Gather, organise, evaluate and interpret financial information to plan and make provision for monitoring budgets and other financial situations
- Communicate effectively: Use everyday language and mathematical language to describe relationships, processes and problem solving methods
- Use mathematics: Use mathematics to analyse, describe and represent financial situations and to solve problems

Formative Assessments

During your training, you were required to complete a number of activities within each Lesson in your Learner Study Guide. You need to complete these activities and attach the evidence of each in this section of your PoE.

Summative Assessment Readiness Statement

Note: **R = Ready** for summative assessment. **NYR = Not Yet Ready** for summative assessment

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	7469 Use mathematics to investigate and monitor the financial aspects of personal and community life		

ASSESSMENT DECISION			
Specific Outcome	R	NYR	Comments
Use mathematics to plan and control personal and/or household budgets and income and expenditure			
Use simple and compound interest to make sense of and define a variety of situations			

Assessor's / Facilitator's Declaration:

I hereby declare that I have assessed the learner's formative assessment and find the learner ready / not yet ready for the summative assessment

Assessor / Facilitator Name	Signature

SUMMATIVE ASSESSMENTS

Knowledge Questionnaire 7469

1. What is a budget? (1)

A budget is a plan of the amount of money coming in and the amount of money going out. In other words or
It is a written plan of all the money you are earning and spending.

2. Give three reasons for budgeting for your expenses and savings. (3)

to avoid getting into a situation in which you find that you have spent more than you can afford, and
to exercise a measure of discipline over your spending, enabling you to save part of your salary, and accumulate a capital base on which to build the prosperity that you desire for yourself and your family.
to save money for emergencies
to save for large items, e.g. furniture, etc.
to ensure that you can achieve your financial goals

3. Explain the difference between savings and investments. (2)

Savings means putting money aside on a regular basis
investment is the long-term application of our collected or accumulated money

4. What is interest? (1)

Interest is the cost of money

5. What is compound interest? (1)

Compound interest means "interest on interest".

6. What is the cost price of an item? (2)

In a business the cost price of an item includes the actual price they paid for it plus the transport costs involved in getting the goods to their shops or warehouses

7. How is the selling price calculated? (2)

To calculate the selling price a business uses the costs of sales (or cost of goods sold) and adds an amount for profit.

8. What is profit? (1)

Profit is the reward a business reaps from high levels of productivity, quality, customer satisfaction, cost saving, investment in training, etc

TOTAL: 12

Practical Workplace Logbook

Attach the completed workplace logbook and workbook behind this page

Acknowledgment of Receipt

I _____

(Learner) acknowledge receipt of my Workplace assignment workbook on this the

_____ day of _____ 20_____

The process of on-the-job training has been explained to me.

_____

Signature of Learner

_____

Name of Facilitator/Mentor/Supervisor:

_____

Signature of Facilitator/Mentor/Supervisor

Indirect Evidence

Indirect Evidence is evidence produced about the learner from another source. This is usually in the form of reports of third party sources, i.e. sources other than the assessor.

Indirect evidence can be used to verify the authenticity of other forms of evidence. In addition, it may be necessary to corroborate these forms of evidence.

Sources of indirect evidence include:

- Team outputs
- Work completed at an earlier stage
- Performance appraisals
- Training records
- Testimonials
- Reviews and commendations
- Certificates and qualifications
- Medals, prizes and trophies
- Customer / client ratings

Please attach any indirect evidence you may have on the required outcomes within the PoE behind this page.

Declaration Of Authenticity Of Evidence

I (Initials and Surname)	
ID No:	
declare/certify that the learning activities completed in the Learner Activity Workbook in its entirety is my own original and authentic work (interpreter declaration to be completed where necessary) I acknowledge that should it come to the attention/reported to the Training Provider/ SETA or relevant authorities, and there is sufficient evidence to prove that there is an irregularity regarding the authenticity of this submission the necessary steps will be taken against me which can result in one or more of the following decisions being taken:	
A criminal case being opened, Learner achievement certificate cancelled, withdrawn Non processing of Learner Achievement submissions to the SETA pending the outcome of an investigation De-registration as an Assessor/Moderator (where unauthorised assistance is provided by the Assessor/Facilitator) Investigation into the accreditation status of the Training Provider if there is an irregularity on the part of the Training Provider	
I know and understand the contents of this declaration: I have no objection to signing the prescribed declaration. The declaration was also explained to me by the Training Provider/Facilitator	
Signature of Learner:	Date
Signature of Facilitator/Assessor:	Date

Evidence Locator & Sign-off 7469

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 7469	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO1: Use mathematics to plan and control personal and/or household budgets and income and expenditure				
SO1, AC1 Plans describe projected income and expenditure realistically	Knowledge Questionnaire Assignment 6			
SO1, AC2 Calculations are carried out using computational tools efficiently and correctly and solutions obtained are verified in terms of the context	Knowledge Questionnaire Assignment 6			
SO1, AC3 Budgets are presented in a manner that makes for easy monitoring and control	Knowledge Questionnaire Assignment 6			
SO1, AC4 Actual income and expenditure are recorded accurately and in relation to planned income and expenditure. Variances are identified and explained and methods are provided for control	Knowledge Questionnaire Assignment 6			
SO2: Use simple and compound interest to make sense of and define a variety of situations				
SO2, AC1 The differences between simple and compound interest are described in terms of their common applications and effects	Knowledge Questionnaire Assignment 7			

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 7469	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO2, AC2 Methods of calculation are appropriate to the problem types	Knowledge Questionnaire Assignment 7			
SO2, AC3 Computational tools are used efficiently and correctly and solutions obtained are verified in terms of the context or problem	Knowledge Questionnaire Assignment 7			
SO2, AC4 Solutions to calculations are used effectively to define the changes over a period of time	Knowledge Questionnaire Assignment 7			

Record of Learning

Candidate's Name:	ID No	
Assessor's Name:	Ass. Reg. No	
Moderator's Name:	Mod. Reg. No	
Date:		

UNIT STANDARD	NQF LEVEL	CREDITS	DATE OF COMPLETION	SIGNATURE OF ASSESSOR	SIGNATURE OF MODERATOR
7469	2	2			

ASSESSMENT REVIEW

NAME of LEARNER	**NAME of ASSESSOR**
VENUE	**DATE of REVIEW**
UNIT STANDARD	7469 Use mathematics to investigate and monitor the financial aspects of personal and community life

Review Dimension	**ASSESSOR**	**LEARNER/ CANDIDATE**	**ACTION**
The principles/criteria for good assessment were achieved?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment related to the registered unit standard?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment was practical?	☐Agree ☐Disagree	☐Agree ☐Disagree	
It was time efficient and cost-effective and did not interfere with my normal responsibilities?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment instruments were fair, clear and understandable	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment judgements was made against set requirements	☐Agree ☐Disagree	☐Agree ☐Disagree	
The venue and equipment was functional?	☐Agree ☐Disagree	☐Agree ☐Disagree	
Special needs were identified and the assessment plan was adjusted	☐Agree ☐Disagree	☐Agree ☐Disagree	
Feedback was constructive against the evidence required	☐Agree ☐Disagree	☐Agree ☐Disagree	
An opportunity to appeal was given	☐Agree ☐Disagree	☐Agree ☐Disagree	
The evidence was recorded	☐Agree ☐Disagree	☐Agree ☐Disagree	

LEARNER'S DECLARATION OF UNDERSTANDING

I am aware of the moderation process and understand that the moderator could declare the assessment decision invalid

Learner Date	**Assessor Date**	**Moderator Date**

Assessor Review

Assessors must review the assessment process by completing this document. Please attach any additional information if required.

Evaluation Criteria	**YES**	**NO**
Was the assessment preparation adequate?		
Was the learner informed of the assessment and policies?		
Design/prepare the assessment tools & - documentation according to ETQA and company QMS correct?		
Integration into work or learning: Was the assessment as unobtrusive as possible?		
Was maximum use made of naturally occurring events & readily available evidence?		
Systematic Process: Was the assessment process properly planned & structured?		
Involvement of the learner: Was the learner involved throughout the assessment process?		
Did the learners contribute to the planning of assessment & the collection of evidence?		
Open: Did the learners understand the assessment process and the criteria, which apply?		
Environment: A supportive, non-threatening environment is created for assessment.		
Was the assessment Valid?		
Was the assessment Reliable?		
Was the assessment Consistent?		
Was the assessment Authentic?		
Was the assessment Sufficient?		
Was the assessment Current?		
Was the feedback given?		
Completed the result of the assessment according to the requirements of the organization and/or employer, as well as the relevant ETQA.		
Records & assessment instruments have to be kept for quality assurance purposes, as well as possible appeals.		
What did you as assessor do well?		

What did you as assessor not do well?	
Did you identify any weaknesses in the design of the assessment? If so, suggest improvements	
Quality of the unit standard: is it fit for the purpose it was designed for? If not, please make suggestions for improvements	
Additional comments	
Assessor signature	Date

Candidate Feedback Report

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	7469 Use mathematics to investigate and monitor the financial aspects of personal and community life		

Assessment Decision			
Source of Evidence	C	NYC	Comments
Assessments			
Product			
Indirect Evidence			
Overall Assessment Decision			
Additional Notes			
Date			
Signature of Assessor			Signature of Candidate

Candidate Appeal Form

Candidate's Name:		ID No.	
Assessor's Name:		Reg. No.	
Unit Standard Title:	7469 Use mathematics to investigate and monitor the financial aspects of personal and community life		
Date:			
SECTION 1			
Candidate's reason for disagreeing with the assessment decision			
Assessor's rationale for the assessment decision			
Candidate's signature			
Assessor's signature			

SECTION 2	
Internal Moderator's reconsidered decision and rationale	
Internal Moderator's Signature	
Advising Assessor's Signature	
Decision and rationale of the investigatory panel	
Learner Declaration	The above decisions have been explained to me and I accept the assessment decision
Learner's Signature	
Date	

Please send this form to: The Training Provider

Assessor's Report 7469

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	7469 Use mathematics to investigate and monitor the financial aspects of personal and community life		

ASSESSMENT DECISION

Specific Outcome	C	NYC	Comments
Use mathematics to plan and control personal and/or household budgets and income and expenditure			
Use simple and compound interest to make sense of and define a variety of situations			
Overall Assessment Decision			
Comments			
Date			

Signature of Assessor	Signature of Candidate

Moderator's Report 7469

Moderator's Name		Reg. No.	
Assessor's Name		Reg. No.	
Candidate's Name		ID No.	
Unit Standard Title	7469 Use mathematics to investigate and monitor the financial aspects of personal and community life		

MODERATION DECISION

Specific Outcome	C	NYC	Comments
Use mathematics to plan and control personal and/or household budgets and income and expenditure			
Use simple and compound interest to make sense of and define a variety of situations			
Overall Moderation Decision			
Feedback to Assessor			
Action Required			
Date of Moderation			

Signature of Moderator	
Signature of Assessor	
Signature of Candidate	

Agreed Assessment Plan 9009

Candidate's Name:			
Assessor's Name:			
Unit Standard Title:	9009 Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems		
Special Assessment Requirements			
Event	**Date, time and location**	**Resources required**	**Evidence to be generated**
Attend Training		Training material, Facilitator	Attendance Register
Complete assessments		Assessments	Completed Assessments
Complete Portfolio of Evidence		Portfolio of Evidence guide	Completed Portfolio of Evidence
Submit Portfolio of Evidence to Training provider			Acknowledgement of receipt from Training provider
Assessor roles and responsibility			
Roles	❖ Assessor ❖ Guide ❖ Feedback Agent ❖ Reviewer		
Responsibilities	❖ Consult candidate re assessment, assessment process and plan ❖ Agree assessment process and plan with candidate ❖ Forward documentation to candidate: plan, guide and assessment instruments ❖ Assess candidate with the use of different instruments ❖ Provide feedback on assessment findings ❖ Support candidate through assessment process ❖ Source feedback from candidate on assessment process ❖ Review assessment process and outcome ❖ Use assessment process as opportunity to transform assessment activities and outcomes		

Candidate roles and responsibility	
Roles	❖ Candidate ❖ Feedback agent ❖ Reviewer
Responsibilities	❖ Be available for assessment ❖ Be actively involved in the consultative process ❖ Learn from the assessment process ❖ Provide feedback to the assessor in terms of the assessment as learning activity ❖ Provide feedback to the assessor on the efficacy of the assessment process ❖ Review own role and assessor role in the assessment process
Assessment Instruments	❖ Portfolio of evidence ❖ Work sample ❖ Observation

Assessment Process	
Step	**Date**
❖ Evaluation of POE addressing Essential Embedded Knowledge in unit standards ❖ Evaluation of Research Projects and other evidence address specific unit standards ❖ Consultation: assessment plan and assessment activities and instruments. Pre-assessment moderation and interviews conducted at this stage ❖ Observation: feedback on assessment against specific outcomes, critical outcomes and constructs in unit standards ❖ Feedback: to candidate regarding sufficiency of evidence and possible interview to gain supplementary evidence ❖ Feedback to candidate regarding assessment findings as well as review process	
Feedback	Written feedback to be given to all stakeholders at the end of the assessment process, as well as verbal feedback to the candidate during assessment activities
Recording Process	Process and findings to be recorded and submitted for record keeping purposes as well as moderation and verification
Review Process	The review process is the responsibility of the assessor and the candidate. Joint reviewing will take place after feedback has been given to the candidate
Right to appeal	The candidate must be advised of the right to appeal

	Step	Date
Accessibility and safety of environment	❖ Site inspection conducted ❖ Pre-assessment moderation conducted	
Resources Required	❖ Assignments ❖ POE ❖ Assessments	

I confirm that:

I have been consulted on and have agreed to the training and assessment process as detailed in the assessment guide

I have been advised of my right to appeal against any assessment that is unfair, unreliable, invalid or impracticable

I have read and understood the appeal procedure

I know that assessments may be moderated or verified by an external party

The purpose of the assessment has been clearly explained to me

The criteria have been discussed with me, and I know I will be assessed against these criteria

I know when and where I will be assessed, and I was given fair notice

I know how the assessment will be done, and any other requirements related to the assessment

I am ready to be assessed

Signed: _____ **Date:** _____

_____

Overall Assessment Decision	Competent	Not yet competent	
Candidate's Signature		**Date**	
Assessor's Signature		**Date**	
Moderator's Signature		**Date**	

UNIT STANDARD 9009

Unit Standard Title

Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems

NQF Level

2

Credits

3

Purpose

This Unit Standard is designed to provide credits towards the mathematical literacy requirement of the NQF at Level 2. The essential purposes of the mathematical literacy requirement are that, as the learner progress with confidence through the levels, the learner will grow in:

- A confident, insightful use of mathematics in the management of the needs of everyday living to become a self-managing person
- An understanding of mathematical applications that provides insight into the learner's present and future occupational experiences and so develop into a contributing worker
- The ability to voice a critical sensitivity to the role of mathematics in a democratic society and so become a participating citizen

Learning Assumptions

The credit value is based on the assumption that people starting to learn towards this unit standard are competent in Mathematics and Communications at NQF level 1

Range

This unit standard includes the requirement to:

- Identify issues suited to resolution by basic statistical methods.
- Work with existing data.
- Generate statistics through the use calculators and other available technology.
- Represent data in the form of tables, charts and graphs.
- Use statistics and representations of data to
  - Summarise real-life and or work related issues within the experience of the learner.
  - Give opinions on statistics and representations of data.
- More detailed range statements are provided for specific outcomes and assessment criteria as needed

Specific Outcomes and Assessment Criteria

Specific outcome 1: Apply various techniques to organise and represent data in order to model situations for specific purposes

Range: Techniques include:

- Using a variety of methods to represent statistics including pie charts, bar graphs, stem and leaf plots;
- Reading tables (e. g., the meaning of row and column headings and the relationship between age by gender by province);
- Extracting a suitable set of data from tables and databases (e. g., census data, tables in newspapers, HIV data; weather data);
- Recording and organising data into tables;
- Calculating measures of centre and spread such as mean, median, mode, and range; the use of quartiles in classifying data items ("Measures of centre and spread" should be handled via examples, which are directly related to the life or work experiences of each learner. For example workers` wages and learners` test scores).

Assessment criteria

- Questions about sets of data that can be dealt with through statistical methods are identified correctly
- Existing tables are understood correctly through a proper application of row and column headings
- Raw data or statistics in the body of tables are used correctly
- Effective methods to record and organise data are used to solve problems
- Calculations of statistics are correct
- Appropriate statistics are used to answer questions
- Scales used in graphical representations and tables are consistent with the data, are correct, clear and appropriate to the situation and target audience

Specific outcome 2: Give opinions on the implications of the modelled data for the required purpose

Range: Purposes include:

- Determining trends in societal issues such as crime and health;
- Identifying relevant characteristics of target groups such as age range, gender, socio-economic group, cultural belief, and performance;
- Considering the attitudes or opinions of people on current issues relevant to the life experience of the learners;
- Determining weather patterns for a given region.

Assessment criteria

- Verbal (written or oral) explanation of findings is based on the representation of the data
- Trends, group profiles and attitudes are justified
- Appropriate information is extracted from representations in order to answer questions

Essential embedded knowledge

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that the possession or lack of the knowledge can be inferred directly from the quality of the candidate `s performance against the standards.

- Methods for selecting, organising data and calculating statistics
- The meaning of concepts such as centre and spread
- Techniques for representing and drawing conclusions from statistics

Critical Cross-field Outcomes

- Identify and solve problems using critical and creative thinking: Give opinions, based on data and statistics, on a variety of problems and issues
- Collect, analyse, organise and critically evaluate information: Select organise, and give opinions on statistics to make sense of situations related to the life or work of the learner
- Communicate effectively: Use everyday language and mathematical language to represent data, statistics and probabilities and to communicate conclusions
- Use mathematics: Use mathematics to describe and represent situations and to solve life related problems.

Formative Assessments

During your training, you were required to complete a number of activities within each Lesson in your Learner Study Guide. You need to complete these activities and attach the evidence of each in this section of your PoE.

Summative Assessment Readiness Statement

Note: **R = Ready** for summative assessment. **NYR = Not Yet Ready** for summative assessment

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9009 Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems		

ASSESSMENT DECISION			
Specific Outcome	R	NYR	Comments
Apply various techniques to organise and represent data in order to model situations for specific purposes			
Give opinions on the implications of the modelled data for the required purpose			

Assessor's / Facilitator's Declaration:

I hereby declare that I have assessed the learner's formative assessment and find the learner ready / not yet ready for the summative assessment

Assessor / Facilitator Name	Signature

SUMMATIVE ASSESSMENTS

Knowledge Questionnaire 9009

1. Explain statistics. (1)

Statistics is the collection and analysis of numerical data in large quantities

2. Give two examples from your work or home life where you can gather information and analyse this information. (2)

In the workplace, you can gather information about how many passengers you collect every day with your bus, how much fuel your bus uses, how many employees are off sick during winter, how much stationery is used by the administration department, etc. Once you have the information, you can analyse it to find out what the trend is.

3. Explain what a bar graph is used for (1)

Bar graphs compare measurements at intervals, the bars run horizontally

4. What is a pie chart used for? (1)

Show the breakdown of a total. A pie chart is a good way to show how a fixed number is divided.

5. When would you use a stemplot? (1)

When you have a small amount of data and you want to create a graph quickly

6. Explain frequency distribution (2)

Frequency distribution: where you arrange (distribute) data in some kind of order. A frequency distribution tells you how often certain numbers or values occur.

7. Explain range (1)

Range: The difference between the lowest and highest items in a set of data is called the range of the data set

8. Explain Arithmetic mean (1)

= (sum of cases)/total number of cases

9. Explain Median (1)

is the middle value in a spread of values arranged in order from the lowest to the highest?

10. Explain mode. (1)

the number occurring most frequently is the mode.

TOTAL: 12

Practical Workplace Logbook

Attach the completed workplace logbook and workbook behind this page

Acknowledgment of Receipt

I _____

(Learner) acknowledge receipt of my Workplace assignment workbook on this the

_____ day of _____ 20_____

The process of on-the-job training has been explained to me.

_____

Signature of Learner

_____

Name of Facilitator/Mentor/Supervisor:

_____

Signature of Facilitator/Mentor/Supervisor

Indirect Evidence

Indirect Evidence is evidence produced about the learner from another source. This is usually in the form of reports of third party sources, i.e. sources other than the assessor.

Indirect evidence can be used to verify the authenticity of other forms of evidence. In addition, it may be necessary to corroborate these forms of evidence.

Sources of indirect evidence include:

- Team outputs
- Work completed at an earlier stage
- Performance appraisals
- Training records
- Testimonials
- Reviews and commendations
- Certificates and qualifications
- Medals, prizes and trophies
- Customer / client ratings

Please attach any indirect evidence you may have on the required outcomes within the PoE behind this page.

Declaration Of Authenticity Of Evidence

I (Initials and Surname)	
ID No:	
declare/certify that the learning activities completed in the Learner Activity Workbook in its entirety is my own original and authentic work (interpreter declaration to be completed where necessary) I acknowledge that should it come to the attention/reported to the Training Provider/ SETA or relevant authorities, and there is sufficient evidence to prove that there is an irregularity regarding the authenticity of this submission the necessary steps will be taken against me which can result in one or more of the following decisions being taken:	
A criminal case being opened, Learner achievement certificate cancelled, withdrawn Non processing of Learner Achievement submissions to the SETA pending the outcome of an investigation De-registration as an Assessor/Moderator (where unauthorised assistance is provided by the Assessor/Facilitator) Investigation into the accreditation status of the Training Provider if there is an irregularity on the part of the Training Provider	
I know and understand the contents of this declaration: I have no objection to signing the prescribed declaration. The declaration was also explained to me by the Training Provider/Facilitator	
Signature of Learner:	Date
Signature of Facilitator/Assessor:	Date

Evidence Locator & Sign-off 9009

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 9009	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO1: Apply various techniques to organise and represent data in order to model situations for specific purposes				
SO1, AC1 Questions about sets of data that can be dealt with through statistical methods are identified correctly	Knowledge Questionnaire Assignment 8			
SO1, AC2 Existing tables are understood correctly through a proper application of row and column headings	Knowledge Questionnaire Assignment 8			
SO1, AC3 Raw data or statistics in the body of tables are used correctly	Knowledge Questionnaire Assignment 8			
SO1, AC4 Effective methods to record and organise data are used to solve problems	Knowledge Questionnaire Assignment 8			
SO1, AC5 Calculations of statistics are correct	Knowledge Questionnaire Assignment 8			
SO1, AC6 Appropriate statistics are used to answer questions	Knowledge Questionnaire Assignment 8			
SO1, AC7 Scales used in graphical representations and tables are consistent with the data, are correct, clear and appropriate to the situation and target audience	Knowledge Questionnaire Assignment 8			
SO2: Give opinions on the implications of the modelled data for the required purpose				

Evidence required (Evidence required to support the practical components of the specific outcomes & assessment criteria, expressed in the context of the assessment) U/S 9009	**Sources of evidence** (where/how the assessor can find the evidence)	**C / NYC**		**Assessor's comments in support of judgement (where required)**
		✓	**X**	
SO2, AC1 Verbal (written or oral) explanation of findings is based on the representation of the data	Knowledge Questionnaire Assignment 8			
SO2, AC2 Trends, group profiles and attitudes are justified	Knowledge Questionnaire Assignment 8			
SO2, AC3 Appropriate information is extracted from representations in order to answer questions	Knowledge Questionnaire Assignment 8			

Record Of Learning

Candidate's Name:	ID No	
Assessor's Name:	Ass. Reg. No	
Moderator's Name:	Mod. Reg. No	
Date:		

UNIT STANDARD	NQF LEVEL	CREDITS	DATE OF COMPLETION	SIGNATURE OF ASSESSOR	SIGNATURE OF MODERATOR
9009	2	3			

ASSESSMENT REVIEW

NAME of LEARNER	**NAME of ASSESSOR**
VENUE	**DATE of REVIEW**
UNIT STANDARD	9009 Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems

Review Dimension	**ASSESSOR**	**LEARNER/ CANDIDATE**	**ACTION**
The principles/criteria for good assessment were achieved?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment related to the registered unit standard?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment was practical?	☐Agree ☐Disagree	☐Agree ☐Disagree	
It was time efficient and cost-effective and did not interfere with my normal responsibilities?	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment instruments were fair, clear and understandable	☐Agree ☐Disagree	☐Agree ☐Disagree	
The assessment judgements was made against set requirements	☐Agree ☐Disagree	☐Agree ☐Disagree	
The venue and equipment was functional?	☐Agree ☐Disagree	☐Agree ☐Disagree	
Special needs were identified and the assessment plan was adjusted	☐Agree ☐Disagree	☐Agree ☐Disagree	
Feedback was constructive against the evidence required	☐Agree ☐Disagree	☐Agree ☐Disagree	
An opportunity to appeal was given	☐Agree ☐Disagree	☐Agree ☐Disagree	
The evidence was recorded	☐Agree ☐Disagree	☐Agree ☐Disagree	

LEARNER'S DECLARATION OF UNDERSTANDING

I am aware of the moderation process and understand that the moderator could declare the assessment decision invalid

Learner Date	**Assessor Date**	**Moderator Date**

Assessor Review

Assessors must review the assessment process by completing this document. Please attach any additional information if required.

Evaluation Criteria	**YES**	**NO**
Was the assessment preparation adequate?		
Was the learner informed of the assessment and policies?		
Design/prepare the assessment tools & - documentation according to ETQA and company QMS correct?		
Integration into work or learning: Was the assessment as unobtrusive as possible?		
Was maximum use made of naturally occurring events & readily available evidence?		
Systematic Process: Was the assessment process properly planned & structured?		
Involvement of the learner: Was the learner involved throughout the assessment process?		
Did the learners contribute to the planning of assessment & the collection of evidence?		
Open: Did the learners understand the assessment process and the criteria, which apply?		
Environment: A supportive, non-threatening environment is created for assessment.		
Was the assessment Valid?		
Was the assessment Reliable?		
Was the assessment Consistent?		
Was the assessment Authentic?		
Was the assessment Sufficient?		
Was the assessment Current?		
Was the feedback given?		
Completed the result of the assessment according to the requirements of the organization and/or employer, as well as the relevant ETQA.		
Records & assessment instruments have to be kept for quality assurance purposes, as well as possible appeals.		
What did you as assessor do well?		

What did you as assessor not do well?	
Did you identify any weaknesses in the design of the assessment? If so, suggest improvements	
Quality of the unit standard: is it fit for the purpose it was designed for? If not, please make suggestions for improvements	
Additional comments	
Assessor signature	Date

Candidate Feedback Report

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9009 Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems		

Assessment Decision			
Source of Evidence	C	NYC	Comments
Assessments			
Product			
Indirect Evidence			
Overall Assessment Decision			
Additional Notes			
Date			
Signature of Assessor			Signature of Candidate

Candidate Appeal Form

Candidate's Name:		ID No.	
Assessor's Name:		Reg. No.	
Unit Standard Title:	9009 Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems		
Date:			
SECTION 1			
Candidate's reason for disagreeing with the assessment decision			
Assessor's rationale for the assessment decision			
Candidate's signature			
Assessor's signature			

SECTION 2	
Internal Moderator's reconsidered decision and rationale	
Internal Moderator's Signature	
Advising Assessor's Signature	
Decision and rationale of the investigatory panel	
Learner Declaration	The above decisions have been explained to me and I accept the assessment decision
Learner's Signature	
Date	

Please send this form to: The Training Provider

Assessor's Report 9009

Candidate's Name		ID No.	
Assessor's Name		Reg. No.	
Unit Standard Title	9009 Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems		

ASSESSMENT DECISION			
Specific Outcome	C	NYC	Comments
Apply various techniques to organise and represent data in order to model situations for specific purposes			
Give opinions on the implications of the modelled data for the required purpose			
Overall Assessment Decision			
Comments			
Date			

Signature of Assessor	Signature of Candidate

Moderator's Report 9009

Moderator's Name		Reg. No.	
Assessor's Name		Reg. No.	
Candidate's Name		ID No.	
Unit Standard Title	9009 Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems		

MODERATION DECISION

Specific Outcome	C	NYC	Comments
Apply various techniques to organise and represent data in order to model situations for specific purposes			
Give opinions on the implications of the modelled data for the required purpose			
Overall Moderation Decision			
Feedback to Assessor			
Action Required			
Date of Moderation			

Signature of Moderator	
Signature of Assessor	
Signature of Candidate	

MODERATION

Moderation Of Assessments Must Be Planned In Order To:

- Identify the outcomes as per unit standards
- Identify the evidence to be collected
- Identify steps of a logical process
- Design an appropriate assessment (criteria and tool)
- Review success or adjustments to be made to the assessments
- Provide appropriate feedback and set targets and action plans

Pre-Assessment Moderation

This occurs prior to assessment taking place and includes moderation of:

- Assessor suitability/qualifications
- Assessment guidelines which are explained to all assessors in bi-weekly meetings
- Standardised assessment tools which are reviewed in assessor meetings
- Guidelines for organising evidence (see Portfolio of Evidence guidelines)
- Assessor/candidate appeals process
- The assessor must consult with the moderator to ensure that the assessment instrument is valid, reliable and practicable. The moderation model will be the assessor moderator comparison, so as to ensure that the assessment instrument is fit for purpose and that the assessment plan is adequate in order to achieve the outcomes of the assessment process.

Post Assessment Moderation

Post-assessment moderation must take place at the end of the assessment process, once feedback has been given to the candidate.

Post-assessment moderation must check specifically that the evidence on which the decision of competence is based is valid, authentic, current and sufficient. Until post-assessment moderation has taken place, the assessment process is incomplete, as there is a chance that the moderator may disagree with the assessor regarding the decision reached in terms of competence.

Even so, the candidate needs to be cautioned that external moderation/verification needs to take place prior to candidate achievement being confirmed and recorded on the National Candidate Record Database.

The focus in post-assessment moderation is also to address continuous improvement of assessment activities and tools. The moderator needs to critically evaluate the review process and ensure that candidate consultation in the review process was both meaningful and constructive i.e. avoid simplistic yes/no questions which give little qualitative data.

25% of all assessment sampling across the board is moderated. The samples are representative of assessments conducted by each assessor and for each project

WORKPLACE ASSIGNMENT WORKBOOK

NAME	
CONTACT ADDRESS	
Code	
Telephone (H)	
Telephone (W)	
Cellular	
Learner Number	
Identity Number	

EMPLOYER	
EMPLOYER CONTACT ADDRESS	
Code	
Supervisor Name	
Supervisor Contact Address	
Code	
Telephone (H)	
Telephone (W)	
Cellular	

Introduction to the Practical Workplace Logbook

Congratulations completing the program. As part of your training you are required to keep a logbook of all practical on the job training and exposure you receive during the learning process.

You will now be assigned to a mentor who will oversee your off-site training, usually referred to as on-the-job training.

The mentor will assist and advise you on the practical aspects of the job, how to fit into the company, what is expected of you as an employee and as a future supervisor.

This Practical Workplace Logbook must be used as a guide to enable learners to achieve the specific outcomes, including the critical cross-field outcomes of the unit standard for this Learning Programme.

The purpose of the Logbook is to indicate to learners and their workplace coaches / mentors / assessors the practical skills to be developed and to be demonstrated by them in the workplace in order for them to meet the requirements of the specific outcomes and critical cross-field outcomes listed in the unit standard.

Learners must be able to prove their competence at the prescribed skills by being given the opportunity to participate in and perform the tasks / responsibilities that will expose them to the specific outcomes and critical cross-field outcomes and associated skills.

Workplace coaches / mentors / assessors must assess competence in the workplace by looking for evidence in a learner to perform the different tasks in a manner that meets the requirements of the unit standard.

Workplace coaches / mentors / assessor must also ensure that the workplace:

- Is conducive to fair and objective assessments
- Enables the learner to apply and demonstrate skill and knowledge
- Allows the learners to feel comfortable to learn and to be assessed
- Is supportive of the learning interventions

Organisation Name	
Programme Coordinator	
Coordinator Contact Details	
Training Provider	
Provider Role: • Manage delivery • Manage assessment • Manage full provision	
Programme Nature and Name • Qualification • Learnership • Learning Programme • Skills Programme	
Programme Duration (Notional Hours)	
Workplace Component (Notional Hours)	

Criteria	Met	Not Yet Met
The learner is familiar with all required workplace exposure for this learning programme, and has access to the logbook requirements		
The employer / organisation is familiar with all required workplace exposure for this learning programme and has access to the logbook requirements		
All required assessment instruments and resources are available in advance to the employer to carry out workplace assessments		

Responsibilities

Responsibilities of the learner

include:

- One hundred percent commitment to the learning process. Learners are encouraged to study any additional source of information relevant to this learning process.
- Doing all assignments contained in this logbook as well any tasks and assignments received from your mentor or supervisor to whom you have been assigned.
- Although the mentor is responsible to sign off all sections completed, it is the learner's responsibility to ensure that all paperwork is completed and handed in for filing on his/her record of learning. It should be clearly stated to learners that a 100% complete record of learning, as prescribed by this logbook, is their sole responsibility. Any document missing from the record may result in your not being declared competent.
- Discuss any problems that you may have with your mentor.

Mentor

Congratulations on your appointment as a mentor to the learner. This is a very responsible assignment because you have been tasked with the responsibility of rounding off the learner's practical exposure.

You must ensure that you are familiar with all aspects of the work covered in this logbook because you must keep a daily account of the learner's performance.

You are also required to report to the skills development facilitator, or as agreed between yourself, the coordinator and the learner regarding the learner's progress. Your responsibilities as mentor are as follows:

- Attend the mentoring course
- Study the logbook and acquaint yourself with its content and format
- Remember this logbook is the learner's full record of learning and workplace exposure. All activities which the learner participates in must be recorded, and all documents produced in relation to this learnership must form part of the record of learning
- Get all the learners together and explain its purpose to them and also what is required of them
- Remember the mentor is the creator of learning and exposure opportunities. You should therefore not confine the learner's exposure to this logbook alone
- Continuously guide them in doing the assignments and arranging the planned exposure with the relevant departments
- File all duplicate records of learning on a file for each learner
- Send all original records to the training provider at the end of end of each month. The Seta also requires that copies be held at the companies
- This logbook need not be followed chronologically, but please note that the learner is required to work through the entire logbook by the end of the learning period

Responsibilities of the Employer

- Creating an atmosphere conducive to learning
- Giving learners ample access to the working environment. Remember that learners should be productive employees to get practical exposure to all aspects of the transport operation as required by the learnership
- Ensure that learners, mentors and assessors attend all training required and arrange and pay travelling and accommodation costs
- Ensure availability of sufficient mentors and workplace assessors

Training Provider Responsibility

- Provide all practical learning material in electronic and/or hard copy, depending on the circumstances
- Provide training for mentors and workplace assessors if required and provide the learning material
- Visit employers to monitor progress and provide guidance and feedback.
- Provide an online and telephonic support system to all mentors and learners

SUMMATIVE WORKPLACE ASSESSMENTS

Workplace Assignments 7480

Assignment 1: Use Computational Tools for Estimates and Approximations

Activity 1.1

1. Round the following number to the nearest 10

10253

10250

2. Round the following number to the nearest 100.

120342

120300

3. Round the following number to the nearest 1 000

583241

583 000

4. Round the following fraction to the nearest 10th

1,34

1,3

5. Round the following fraction to the nearest 1000th

34,5014

34,501

6. Round the following fraction to the nearest 100th

32,501

32,500

7. Round the following to the nearest minimum and maximum.

Value	Round to	Minimum	Maximum
340ml	10ml	**335ml**	**ml 345**

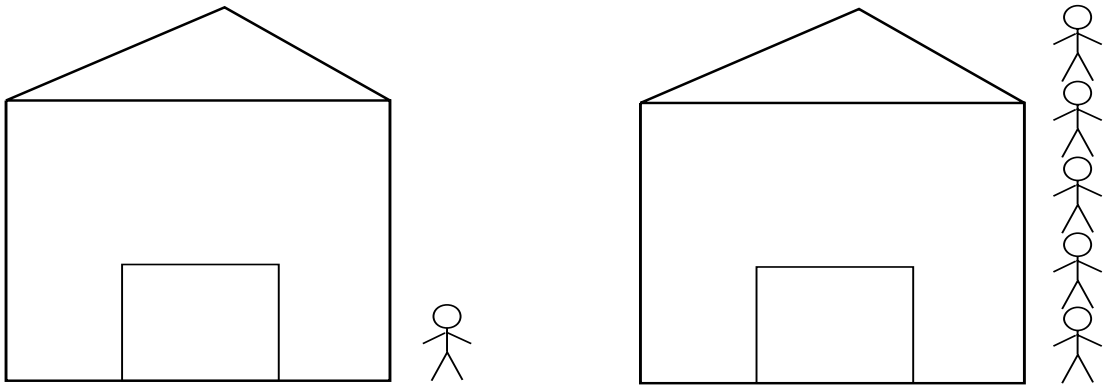
8. If we say that the rule used to determine the number of significant figures the answer of a calculation should have for multiplication and subtraction is that the number with the least significant figures determines the answer, what is the correct answer for the following:

12,345 x 6, 7 = 83

9. If we say that the rule used to determine the number of significant figures the answer of a calculation should have for multiplication and subtraction is to retain the smallest number of decimal places, what is the correct answer for the following:

10,345 + 9, 9 = 20.2

10. A man is standing next to a large building. Estimate the height of the building. Show your steps.



The building appears to be about five times the height of the man standing near the building. (1) Assuming that the man is 1.8m tall, (1) the building is about 9m tall. (1)

11. A box of imported chocolates cost R54.69. Approximately how much will four boxes cost? You must estimate your answer and explain your steps.

R54.69 rounded to the nearest ten rand is R60 so four boxes would cost approximately R240.

Assignment 2: Relationships among Numbers and Systems

Activity 2.1

1. Convert the following repeating decimals to common fractions

1,33333	**1 3/10**
52.535535535	**52 535/1000**

2. Complete the following table:

Number	Name	Fraction
.1	**tenth**	1/10
.01	hundredth	**1/100**
.001	**thousandth**	**1/1000**
.0001	**ten thousandth**	**1/10000**

3. Round off the following numbers to 3 decimal numbers.

1.256784 = **1.257**
22.22222 = **22.222**
8.989993 = **8.990**

4. Convert the following fractions to decimal form

1/2	**= 0.5**
1/3	**= 0.3**
1/4	**= 0.25**
1/5	**= 0.2**
1/6	**= 0.16**

1/7	**= 0.1428571428571**
1/8	**= 0.125**
1/9	**= 0.10101**
1/10	**= 0.1**

5. Write the following in scientific notation:

12345m= **$1{,}2345 \times 10^{4}$m**
0,12m = **$1{,}2 \times 10^{-1}$m**
1mm = **$1/1000\text{m} = 1 \times 10^{-3}$m**

Workplace Assignments 9008

Assignment 3: Estimate, Measure and Calculate

Activity 3.1

1. What is the mass indicated on the spring balance on the next page? (1)

15 kg

2. In each case give the greater/greatest measurement: (2)

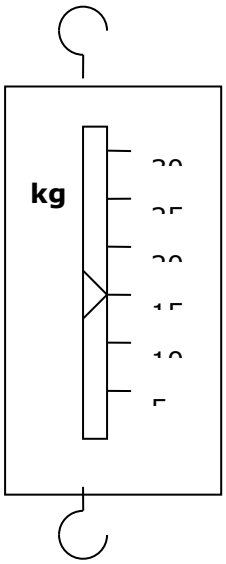
250 g; 0.2 kg **250g**
0.01 kg; 12 000 mg; 10 g **12 000mg**

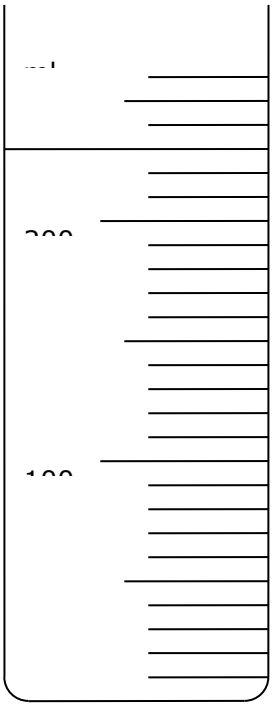
3. Complete the following: (2)

1kg = **1000g** **One litre** = 1 000 ml

4. What is the volume of the liquid in the measuring cylinder on the next page? (1)

230ml





5. Answer the following: (3)

How many hours are there in a day? **24 hours in a day**
How many minutes are there in an hour? **60 minutes in an hour**
How many seconds are there in a minute? **60 seconds in a minute**

6. How many seconds are there in 2 minutes? (1)

120 s

7. How many minutes are there in 3 h 45 min? (1)

225 minutes

8. How many seconds are there in 610,2 minutes? (1)

36612 s

9. Write the following according to the international time system: (3)

2.16 p.m. **: 14:16**
12.05 p.m. : **12:05**
3.12 a.m.: **3:12**

10. What is the normal body temperature of a human being in Celsius? (1)

36°C

11. What is the point at which water freezes in Celsius? (1)

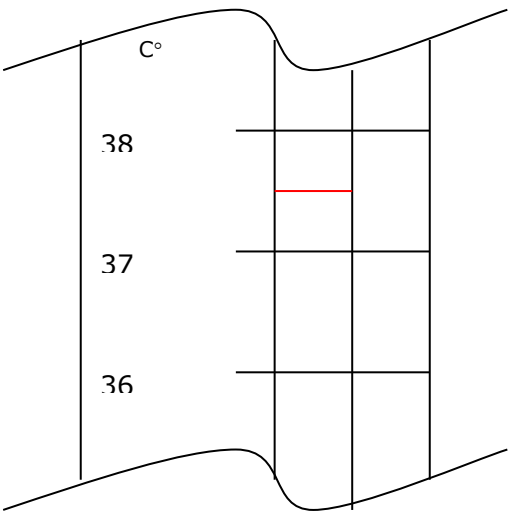
0°C

12. What is the point at which water boils in Celsius? (1)

100°C

13. What is the temperature shown on the thermometer. (1)

37.5 °C



14. The SI system uses the metric (decimal) system and uses a number of standard prefixes for units of length and mass. Complete each of the following: (4)

1. 150cm = m
2. 360mm = m
3. 62ml = litres
4. 3.6 tonnes = kg

Solution

150 cm = 150 × $\frac{1}{100}$ = 1.5m

360mm = 360 × $\frac{1}{1000}$ = 0.36m

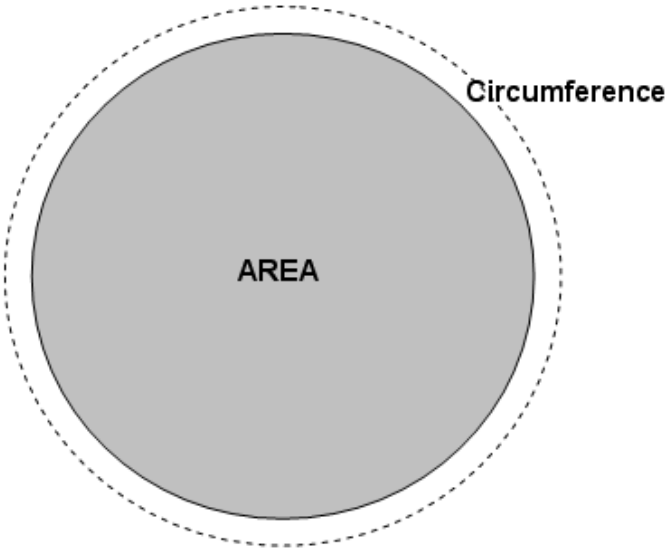
62ml = 62 × $\frac{1}{1000}$ = 0.062 litres

3.6 tonnes = 3.6 × 1000 = 3600kg

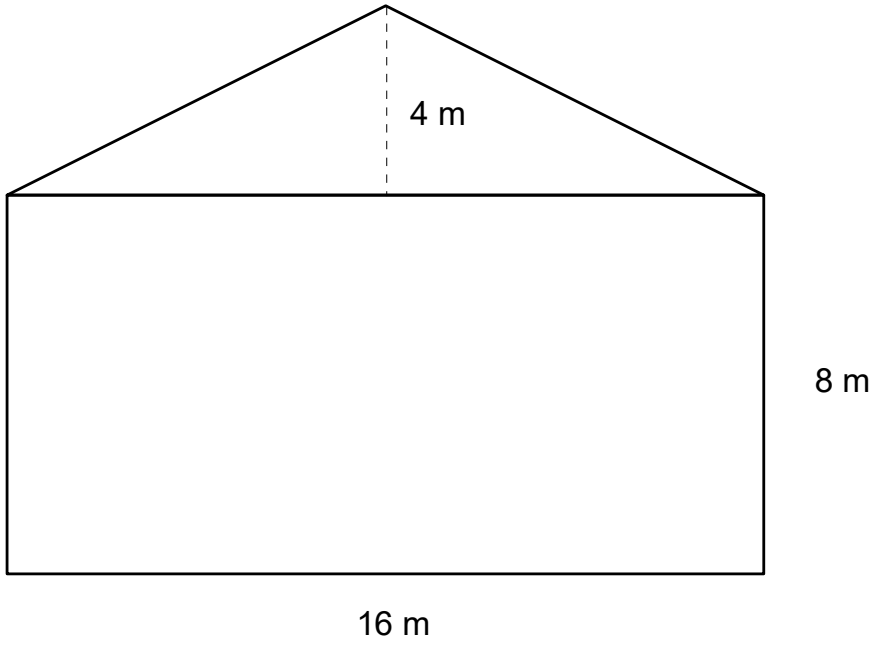
Activity 3.2

1. The radius of a circle is 8 metres, what is the area? Show your steps. (3)

$\Pi \times 8^2 = 3.14 \times 64 = 200.96\ m^2$ **square metres (m^2) (1)**



2. The figure below shows a rough drawing of the side of a large building. Calculate the surface area of this building so you know how much paint to order so that it may be painted. You will use about 5 litres of paint for each 20 m2. (5)



The house basically consists of a rectangle and a triangle. The area of the rectangle is 16 × 8 = 128 square metres (m^2). (1) The area of the triangle is $\frac{1}{2}$ (16 × 4) = 32 square metres (m^2). (1) Adding these figures we obtain 160 square metres (m^2). (1) If we knew that we use about 5 litres of paint for each 20 m^2 we could calculate that we need about 8 tins each of 5 litres of paint. (1) This would be 40 litres altogether. (1)

3. A measuring cylinder can hold 500ml of liquid. Make a drawing of the measuring cylinder containing 250ml milk. (2)

One point for the drawing of the cylinder, showing the measurements, and one point for the correct volume shown.

4. The dimensions of a tumble dryer are:

- Width 559mm
- Height 850mm
- Depth 485mm

You want to fit the tumble dryer into the laundry. There only space available is between the washing machine and the fridge and there is a shelf above this space. You have measured the space between the washing machine and the fridge and it is 550mm wide and 860mm high.

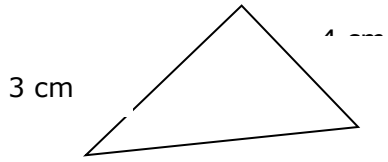
Is the space wide enough for the tumble dryer to fit? Motivate your answer. (2)

No, the width of the tumble dryer is 559mm, and the space is only 550mm wide. One point for the correct answer and one point for the explanation.

5. Is the space high enough for the tumble dryer to fit? Motivate your answer. (2)

Yes, the space is high enough for the tumble dryer to fit, since the height of the tumble dryer is 850mm and the space is 860mm high. One point for the correct answer and one point for the explanation.

6. Calculate the area of the following triangle: (3)



6cm$^{2:}$ three points for the answer with steps, one point for answer only

7. What is the area and perimeter of a rectangle with length 20 cm and width 0.15 m? Show your steps. (6)

Area = 0.03 m^2 (3) with steps, (1) for answer only
Perimeter = 0.70 $m^{2:}$ (3) with steps, (1) for answer only

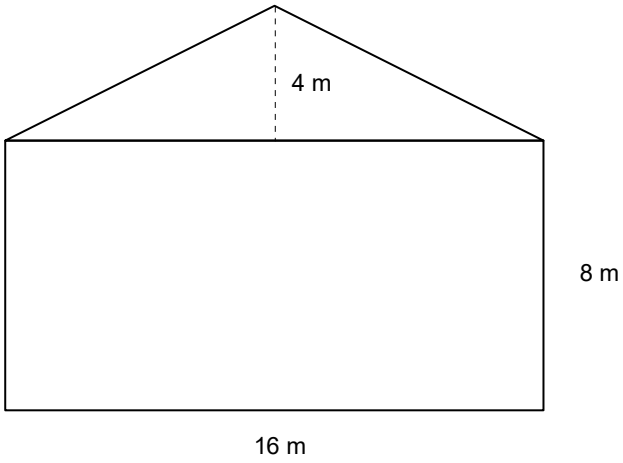
8. Take 1 piece of A4 paper. Calculate the area. Calculate the circumference. What shape is the paper? (3)

Area: 29cm X 20.5cm = 594.5cm^2
Circumference: 29 +29 +20.5 +20.5 = 99cm
Shape is rectangular

9. Fold the paper in half, so that it resembles A5 size paper. What shape is the paper now? Calculate the area. Calculate the circumference. (3)

Area: 14.5cm X 20.5cm = 297.25cm
Circumference: 20.5+20.5 +14.5+14.5 = 70cm
Shape is rectangular

10. Which shapes have been combined to make this drawing? (2)



Two rectangles (1) and one square (1)

11. Draw a square where all the sides are 6cm long. Calculate the area. Calculate the circumference. (3)

Area: 36cm (1)
Circumference: 24cm (1)
One point for the drawing

12. Using your knowledge of geometric shapes, draw a rough sketch of the training room. (11)

One point for the sketch, even if it is not 100% accurate the learner gets one point for the effort, and one point for each of the following that is indicated on the sketch:

The direction north always pointing towards the top or at least like on a clock 10 to 2 or 10 past 10.

The title "Rough sketch" on top of the drawing.

The name of streets or buildings clearly displayed.

Alphabetical numbering of critical elements on or at the scene if you are sketching a crime scene or incident scene.

The name of the person drawing the sketch.

The date and time of the sketch.

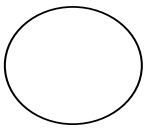
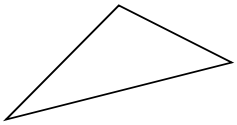
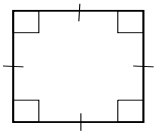
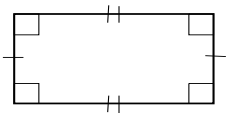
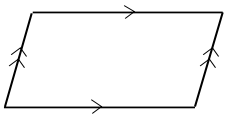
Clear indication of grass, road surfaces and any other information that may assist the user of the sketch.

Signature of the originator.

13. Draw a parallelogram where two of the sides are 6cm long and two sides are 30mm long. Calculate the area. Calculate the circumference. (3)

Area: 18cm
Circumference: 18cm
One point for the drawing

14. Complete the following table: (18)

Name	Drawing	Description
Circle		**The edge of the circle is at a constant distance from the middle. This distance is called the radius.**
Triangle		**A triangle has three straight sides.**
Square		**A square has four equal sides and four right angles.**
Rectangle		**A rectangle has the opposite sides of equal length and four right angles.**
Parallelogram		**A parallelogram has both opposite sides equal and parallel.**

15. Convert the following from the Imperial to the S1 System:

15.1. Convert 54 miles to km. The factor is 1,609.344 metres

86.9km

15.2. Convert 130 pounds to kg. The factor is 0.45359237 kilogram

58.97 kg

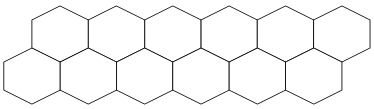
15.3. Convert 9 inches to m. The factor is 0.0254 metre

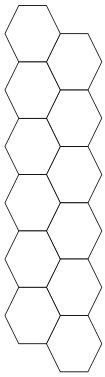
0.2286 m

Assignment 4: Transformations

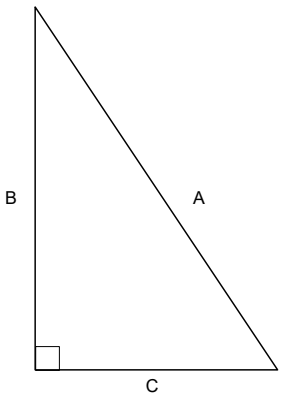
Activity 4.1

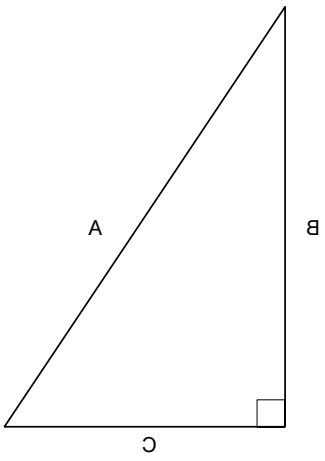
Make a drawing of this tessellation where it is rotated 90º to the right



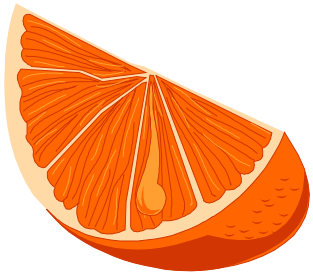


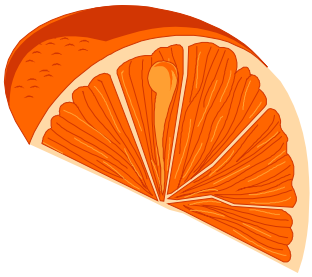
Draw a mirror image for this triangle





Make a drawing of this orange rotated 180º





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Assignment 5: Work With a Range Of Patterns and Functions and Solve Problems

Activity 5.1

Add 5a + 4ab - 7b and 3 - 3b + 5a Show your steps. (3)

Solution:
5a + 4ab - 7b
+5a - 3b + 3
10a + 4ab - 10b + 3

Subtract 4x + xy - 2 from 5x + xy -3 Show your steps. (3)

5x + xy – 3
-(4x + xy – 2)
X + 1

Simplify the following: (2)

3a + 2ab - 6a + 2b – ab =   **ab + 2b - 3a**
3p + 3q - 4pq - 2pq =   **3p + 3q - 6pq**

Add the following expressions: (2)

3a + 4ab; 3a - 4ab =   **6a**
a - 3; 3b + 6 =   **a + 3b + 3**

There are three possible answers to the following: x- y = 2. Calculate the answers. (3)

2 - 0 = 2
3-1 =2
4 - 2 = 2

Calculate the number that must be added to 18 in order to give an answer of 27. Show your steps. (3)

Solution: Let the unknown number be x. Therefore: x + 18 = 27 (1)
Subtract 18 from both sides of the equation.
x + 18 - 18 = 27 – 18 (1)
Therefore: X = 9 (1)

Activity 5.2

Draw Cartesian axes on a sheet of squared paper and place the following points in the plane: (11)

(1,1), (2,1) (-1,1) (3 points)

Draw a straight line through these points. (1 point)

What can be said about the y-coordinate of each point on this line? (1 point)

a) Place (8,2) on the Cartesian plane. (1 point)

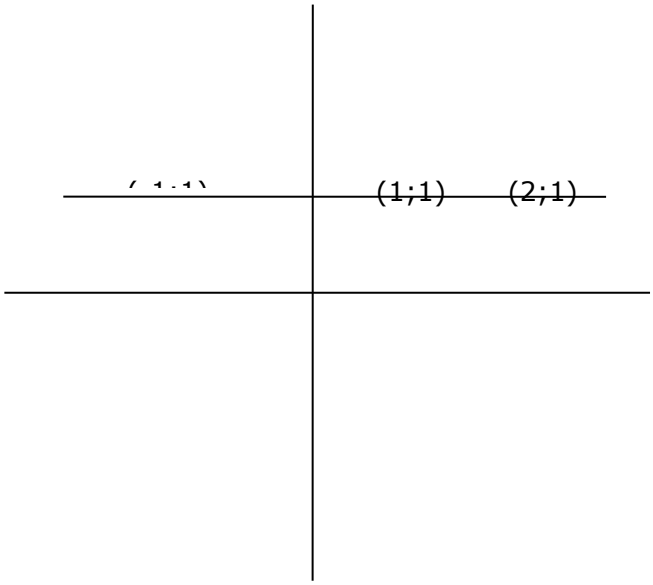
What is the distance from (0,0) to (8,2)? (1 point)

b) Place (6,-2) on the Cartesian plane. (1 point) What is the distance from (0,0) to (6,-2)? (1 point)

What is the distance from (0,2) to (6,-2)? (1 point)

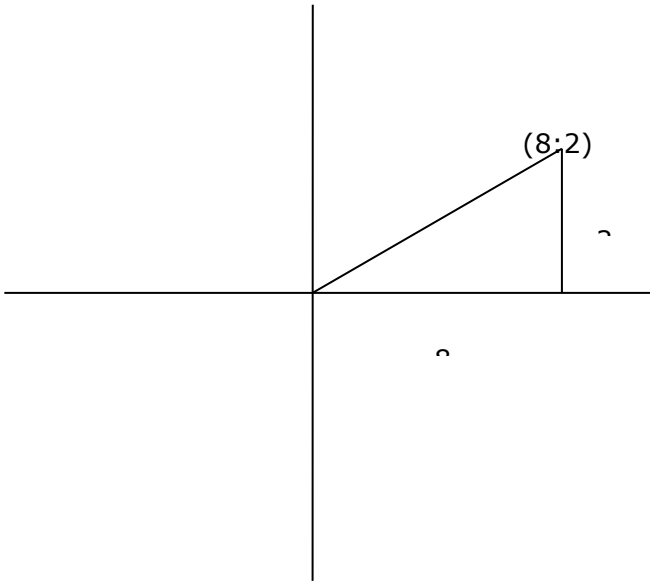
Solution:

And one point for the drawing

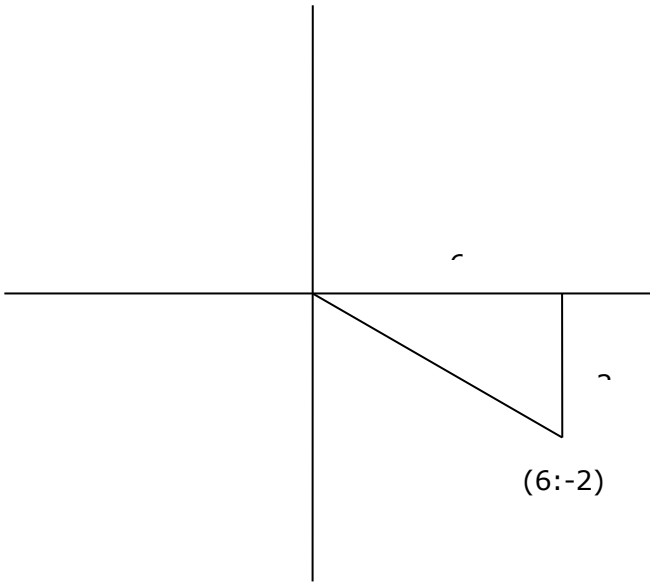


a)

The y values are all 1 thus they are parallel to the x axis.



b) Distance = 8.25 units



distance = 6.32 units

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Assignment 6: Personal Budget

Activity 6.1

1. Complete the following table: (4)

Monthly Income (Schedule A)	
Husband	
Wife	
Other	
Total Income (Net)	

2. Draw up your personal budget. (16)

BUDGET			
EXPENDITURE	**ESTIMATE**	**ACTUAL**	**DATE PAID**
Fixed Expenditure	(1)	(1)	
Sub Total	(1)	(1)	
Variable Expenditure	(1)	(1)	

BUDGET			
EXPENDITURE	**ESTIMATE**	**ACTUAL**	**DATE PAID**
Sub Total	(1)	(1)	
Discretionary Expenditure	(1)	(1)	
Sub Total	(1)	(1)	
Unforeseen Costs	(1)	(1)	
TOTAL EXPENDITURE	(1)	(1)	

3. Is your income more than your expenses? Quote from your budget and income schedule to support your answer. (2)

One point for the answer and one point for quoting from the income schedule to support the answer.

4. Calculate you annual income. (1)

5. Calculate your annual expenses. (1)

6. Are you able to save? How much? (1)

7. How can you cut back on your personal expenses in order to save some money? (2)

One point for each suggestion, to a maximum of two.

Assignment 7: Interest

Activity 7.1

Explain depreciation and give an example of an asset that depreciates in value. (2)

Depreciation is a reduction in accounting earnings which are intended to reflect the reduction in value of an asset

Explain appreciation and give an example of an asset that appreciates in value. (2)

Appreciation is when assets, including the buying power of your money, increases in value

Activity 7.2

You want to borrow R12 000 at an interest rate of 16.5 %, repayable over one year from the bank. Do the following calculations:

What is the interest in rand per month? (3) Show your steps

R 12 000 X 16,5

_____ _____ (1)

1 100

= R 1980 (1)

Divide by 12 = R 165.00 (1)

What is the total interest payable over the one year period? (1)

R 1980.00

What is the total monthly payment? (2) Show your steps

R 1000.00+ R 165.00 (1)

= R 1165.00 (1)

Calculate the compound interest on an investment of R200 000 which is invested for a period of 2 years at 10% interest per year. Show your steps. The formula is shown below. (2)

$$i = p(1 + \frac{r}{100})^t - p$$

$$i = 200000(1 + \frac{10}{100})^2$$

Solution: 200000 X (1 + 10÷100) y^x 2 (1)- 200000 = 42000 (1).
The interest paid for the privilege to use R200 000 for 2 years at 10%, is R44 038.01

You invest R678 for 12 years at a rate of 15.6%. What would your returns be at the end of year 12? (1)

3861.21

Activity 7.3

John Smith takes out an endowment policy in 2015which matures in the year 2031, i.e. in 16 years' time. Assuming inflation stays at an average of 9% over the next few years, we can calculate what the real value of his money will then be, if the projected maturity value is R1.8 million, by using the Rule of 72. What will the value of his payout be in 2031? (1)

His R1.8 million payout in 2014 will only be worth R450 000.

Thabo and Aletta are paying rent of R866 per month and decide to buy a smart new motor car for R36 000. They let the motor dealer arrange a loan on the car for them through a finance company. They are told that the interest rate is 19% FLAT. They don't know what that means, so assume it is REDUCING interest. In fact the TRUE RATE IS JUST UNDER 31%. Their monthly payments are R1320 per month for four years.

In addition they have to pay R866 per month for rent. Their monthly payments total R2 186. At the end of four years, they have spent R104 928 in rent and car payments and own a second-hand car worth R20 000, if they are lucky.

What can you do differently to ensure that you invest in assets that appreciate in value? Name and explain at least two things. (2)

Buy a house that will increase in value while you are paying it off
Make use of public transport instead of buying a car

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Assignment 8: Represent Data and Modelled Data

Activity 8.1

Draw a bar graph to show the heights of the following learners: (5)

Hendrick	183 cm
Paul	181 cm
Thandi	167 cm
Itumeleng	172 cm

One point for the graph and one point for the height of each learner

Draw a circle and divide it into 4 equal parts. What fraction is 1 part of the whole circle? (1)

¼ or 0.25

Shade 50% of the circle. What fraction of the whole is this? (1)

½ or 0.5

Which chart does the circle remind you of? (1)

Pie chart

Activity 8.2

Height of 10-year olds (m)	1.76	1.77	1.8	1.66	1.6	1.79	1.8		
Height of 9-year olds (m)	1.69	1.7	1.5	1.42	1.42	1.75	1.67	1.62	1.6

Look at the table above and do the following:

Calculate the mean of the height of the 10 year old children. (1)

Mean height of 10 year olds = 12.18/7 = 1.74

Calculate the average of the height of the nine year old children. (1)

Mean height of 9 year olds = 14.37/9 = 1.60

Which of the two age groups is typically taller? Why? (2)

when we consider individual heights it (1) seems that 10 year olds are typically taller than 9 year olds. (1)

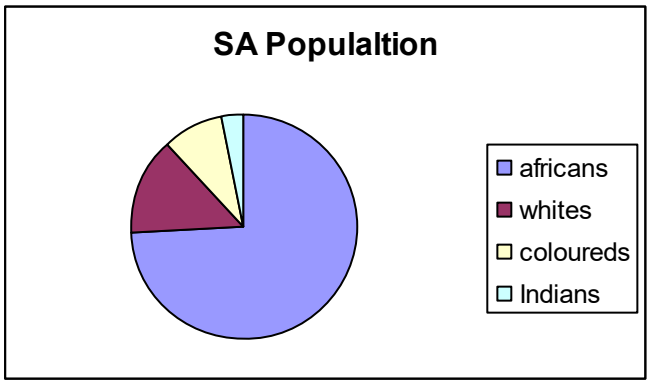
Activity 8.3

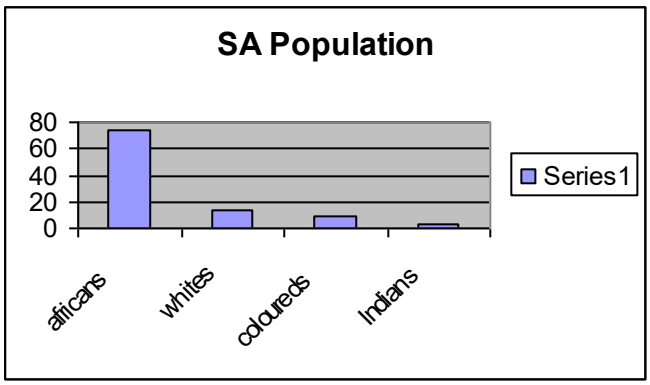
South Africa has a population of over 40 million, of which 53% are women. The largest group of people is African who comprise 74% of the population, followed by whites (14%), coloureds (9%) and Indians (3%). In each race group, women make up slightly more than half the population: 53% among Africans and coloureds and 52% among whites and Indians. A total of 60% of the whole population resides in urban areas. The largest group of women residing in rural areas is African women (93%).

Draw up a table to display the above information. (4)

SA Population	
Africans	**74%**
Whites	**14%**
Coloureds	**9%**
Indians	**3%**

Draw up an appropriate chart for a visual of the information. (5)





One point for the chart, and one point for each population group represented accurately.

A pie chart is ideal, but a bar graph or column chart will also display the information so that assumptions can be made

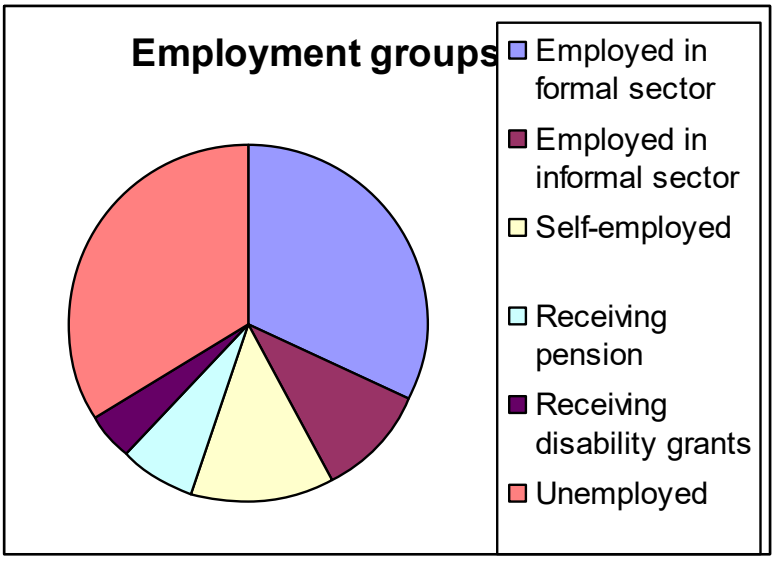
Activity 8.4

Vocational breakdown: just under one third (32%) of respondents were employed in the formal sector with a further one tenth (10%) in the informal sector. Just over one eighth (13%) of the women were self-employed, while pensions were received by 7% and disability grants by 4% of the respondents. The balance - just over one third (34%) of the respondents were unemployed and were reliant on family members for support

Above is the employment breakdown of women who were interviewed for a survey about violence against women. Draw up a table that reflects the information. (12)

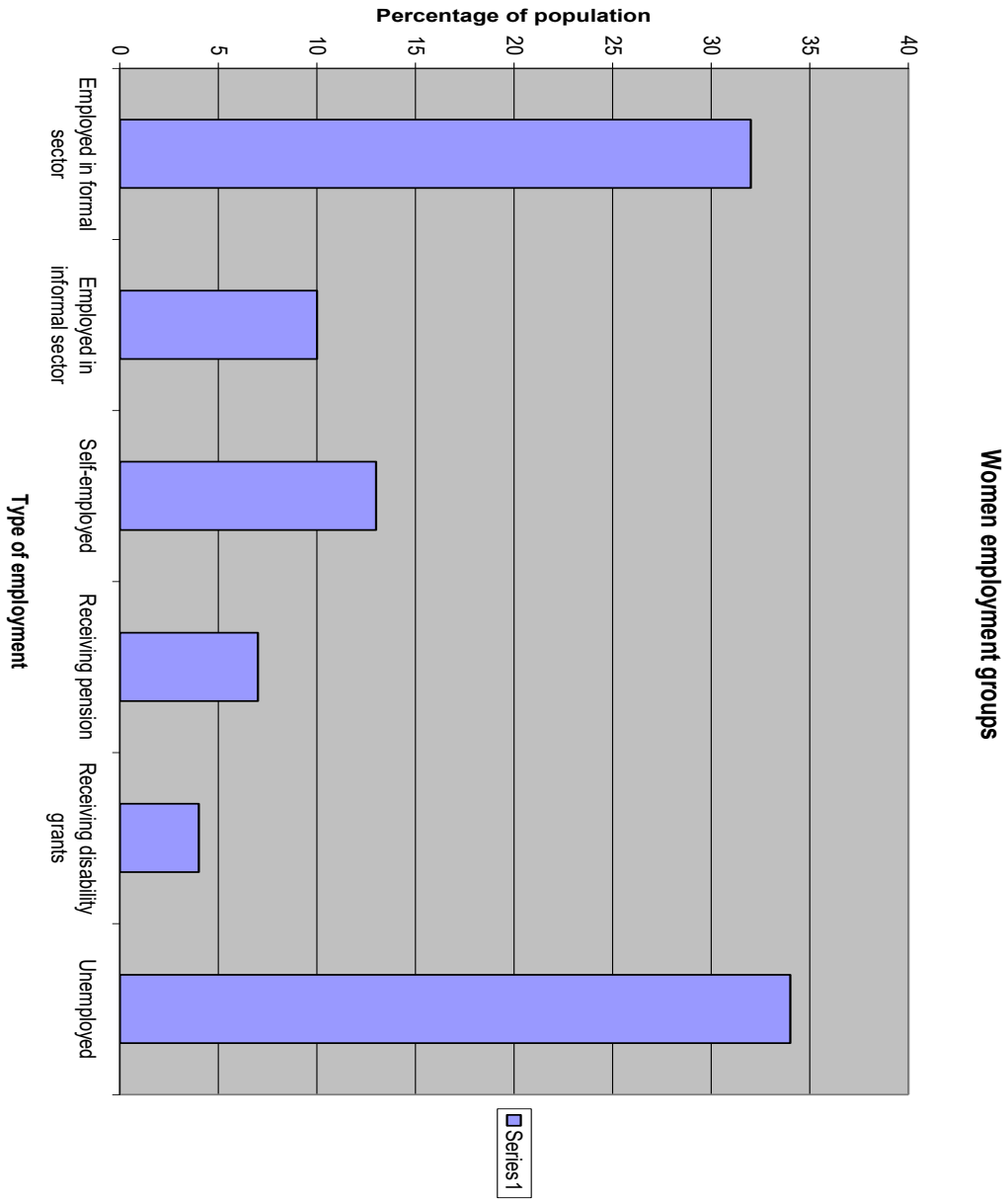
Employed in formal sector	**32%**
Employed in informal sector	**10%**
Self-employed	**13%**
Receiving pension	**7%**
Receiving disability grants	**4%**
Unemployed	**34%**

Draw up an appropriate chart or graph for a visual of the information. (7)



One point for the chart, and one point for each employment group represented accurately.

A pie chart is ideal, but a bar graph or column chart will also display the information so that assumptions can be made



What does this information say to you about financial independence of women in South Africa? You must give at least two opinions. (2)

Almost half (45%) of women are financially dependent on husbands, family and/or grants:
Women employed in the informal sector do not earn big salaries, so they may still be dependent, especially if they have children.
Any two valid opinions that relate to the data are worth one point each.

Logbook 7480				
Date	**Assignment No**	**Start**	**Finish**	**Total Hours**
e.g. 12/9/2014	*1*	*10:00*	*14:00*	*4*

Date	Learner Signature	Date	Mentor/Supervisor Signature

Logbook 9008				
Date	**Assignment No**	**Start**	**Finish**	**Total Hours**
e.g. 12/9/2014	*1*	*10:00*	*14:00*	*4*

Date	Learner Signature	Date	Mentor/Supervisor Signature

Logbook 9007				
Date	**Assignment No**	**Start**	**Finish**	**Total Hours**
e.g. 12/9/2014	*1*	*10:00*	*14:00*	*4*

Date	Learner Signature	Date	Mentor/Supervisor Signature

Logbook 7469				
Date	**Assignment No**	**Start**	**Finish**	**Total Hours**
e.g. 12/9/2014	*1*	*10:00*	*14:00*	*4*

Date	Learner Signature	Date	Mentor/Supervisor Signature

Logbook 9009				
Date	**Assignment No**	**Start**	**Finish**	**Total Hours**
e.g. 12/9/2014	*1*	*10:00*	*14:00*	*4*

Date	Learner Signature	Date	Mentor/Supervisor Signature