

# **QUALIFI ASSESSMENT DOCUMENT**

| Qualification          | Qualifi Level 4 Diploma in Accounting and Finance |
|------------------------|---|
| Qualification No (RQF) | 610/0796/1  |
| Unit Name              | Mathematical Accounting Methods                   |
| Unit Reference         | T/650/2372  |
| No of Credits          | 20 Credits  |

#### Introduction

Prior to attempting this coursework assignment, Learners must familiarise themselves with the following policies:

- Centre Specification can be found at <a href="https://qualifi.net/qualifications/">https://qualifi.net/qualifications/</a>
- Qualifi Quality Assurance Standards
- Qualifi Quality Policy Statement

## **Plagiarism and Collusion**

In submitting the assignment Learner's must complete a statement of authenticity confirming that the work submitted for all tasks is their own. The statement should also include the word count.

Your accredited study centre will direct you to the appropriate software that checks the level of similarity. Qualifi recommends the use of <a href="https://www.turnitin.com">https://www.turnitin.com</a> as a part of the assessment.

Plagiarism and collusion are treated very seriously. Plagiarism involves presenting work, excerpts, ideas or passages of another author without appropriate referencing and attribution.

Collusion occurs when two or more learners submit work which is so alike in ideas, content, wording and/or structure that the similarity goes beyond what might have been mere coincidence

Please familiarise yourself on Qualifi's Malpractice and Maladministration policy, where you can find further information

## Referencing

A professional approach to work is expected from all learners. Learners must therefore identify and acknowledge ALL sources/methodologies/applications used.

The learner must use an appropriate referencing system to achieve this. Marks are not awarded for the use of English; however, the learner must express ideas clearly and ensure that appropriate terminology is used to convey accuracy in meaning.

Qualifi recommends using Harvard Style of Referencing throughout your work.

#### Appendices

You may include appendices to support your work, however appendices must only contain additional supporting information, and must be clearly referenced in your assignment.

You may also include tables, graphs, diagrams, Gantt chart and flowcharts that support the main report should be incorporated into the back of the assignment report that is submitted.

Any published secondary information such as annual reports and company literature, should be referenced in the main text of the assignment, in accordance of Harvard Style Referencing, and referenced at the end of the assignment.

## Confidentiality

Where a Learner is using organisational information that deals with sensitive material or issues, they must seek the advice and permission from that organisation about its inclusion.

Where confidentiality is an issue, Learners are advised to anonymise their assignment report so that it cannot be attributed to that particular organisation.

## **Word Count Policy**

Learners must comply with the required word count, within a margin of +10%. These rules exclude the index, headings, tables, images, footnotes, appendices and information contained within references and bibliographies.

When an assessment task requires learners to produce presentation slides with supporting notes, the word count applies to the supporting notes only.

#### **Submission of Assignments**

All work to be submitted on the due date as per Centre's advice.

All work must be submitted in a single electronic document (.doc file), or via Turnitin, where applicable.

This should go to the tutor and Centre Manager/Programme Director, plus one hard copy posted to the Centre Manager (if required)

#### Marking and grades

Qualifi uses a standard marking rubric for all assignments, and you can find the details at the end of this document.

Unless stated elsewhere, Learners must answer all questions in this document.

## **Assignment Question**

#### Task 1 – 50 words

Be able to use mathematical techniques in accounting.

1.1 Solve equations using mathematical techniques, roots or logarithms.

- Learners should successfully complete a minimum of two worked equations to achieve a pass.
- Root-finding methods use iteration, producing a sequence of numbers that hopefully converge towards the root as a limit. They require one or more initial guesses of the root as starting values, then each iteration of the algorithm produces a successively more accurate approximation to the root.
- Learners should be observed undertaking this task.

1.2 Determine the equation of a straight line.

- Learners should successfully complete a minimum of two equations to achieve a pass.
- The straight line through two points will have an equation in the form y = m x + c. We can find the value of, the gradient of the line, by forming a right-angled triangle using the coordinates of the two points.

#### Task 2 – 50 words

Be able to create and use graphs, charts and diagrams of financial information to inform organisational decision-making.

2.1 Create charts and diagrams and plot graphs from accounting data to illustrate financial situations.

- Accounting data can be used from a learner's workplace or be provided as a case study.
- Learners should include the title of their work within this space provided in the workbook and attach a copy their work along with copies of the data used, any commercially sensitive or confidential information such as organisational name can be redacted. All documentation submitted with this workbook must be clearly referenced and contain the learner's name and date of birth.
- The data used should be attached and referenced as an appendix to this workbook.
- Key Information: A graph is a pictorial representation of data, which has at least 2-dimensional relationship. Therefore, a graph has at least two axes, X and Y. X-axis is usually horizontal while Y-axis is vertical. A graph may either be a single line graph or a multiple line graph. For ease and enhancing of clarity, different types of lines and different shades of Colours can be used for preparing a multiple-line graph. A pie chart represents multiple sub-groups of single variable. A bar diagram depicts two or more variables.

2.2 Interpret mathematical graphs of accounting data accurately.

• Accounting data can be used from a learner's workplace or be provided as a case study. Leaners must provide a written summary giving their own interpretation of the information provided by the graph.

- Learners should include the title of their work within this space provided in the workbook and attach a copy their work along with copies of the data used, any commercially sensitive or confidential information such as organisational name can be redacted. All documentation submitted with this workbook must be clearly referenced and contain the learner's name and date of birth.
- The data used should be attached and referenced as an appendix to this workbook.
- Key Information: Graphic Representation is the method to show and represent values, increases, decreases, comparisons to either make predictions or show a report of how certain situation was yesterday and how it is today. It is the visual display of data through charts and graphs.
- Learners should Plot graphs, applying the general rules and principles of graphical construction.
- To be able to interpret a graph or chart learners should ensure their graph has, title that tells what information is being displayed, a key and labels.

#### Task 3 – 100 words

Be able to apply statistical methods to provide financial and accounting information.

3.1 Explain the difference between quantitative and qualitative data.

- At the highest level, two kinds of data exist: quantitative and qualitative. Quantitative data deals with numbers and things you can measure objectively: dimensions such as height, width, and length. But this is just the highest level of data: there are also different types of quantitative and qualitative data.
- Learners must provide examples of different types of quantitative and qualitative data to achieve a pass, a description without examples is not sufficient to award a pass.

3.2 Clearly and accurately represent and interpret business data to provide financial information.

- Financial data can be used from a learner's workplace or be provided as a case study.
- Presentation of the data may be in any appropriate format and learners should provide a written summary. The data used should be attached as an appendix with this Candidate Workbook. Learners should include the title of their work within this space provided in the workbook and attach a copy their work along with copies of the data used, any commercially sensitive or confidential information such as organisational name can be redacted. All documentation submitted with this workbook must be clearly referenced and contain the learner's name and date of birth.
- The data used should be attached and referenced as an appendix to this workbook.

- Key Information: Data analysis and interpretation is the process of assigning meaning to the collected information and determining the conclusions, significance, and implications of the findings.
- The interpretation of data is designed to help people make sense of numerical data that has been collected, analyzed and presented. Having a baseline method (or methods) for interpreting data will provide your analyst teams a structure and consistent foundation.

3.3 Clearly and accurately apply and interpret statistics analysis to provide financial information.

- Financial data can be used from a learner's workplace or be provided as a case study.
- Learners should record their statistical analysis of the data and provide a written summary. The data used should be attached as an appendix with this Candidate Workbook Learners should include the title of their work within this space provided in the workbook and attach a copy their work along with copies of the data used, any commercially sensitive or confidential information such as organisational name can be redacted. All documentation submitted with this workbook must be clearly referenced and contain the learner's name and date of birth.
- Key Information: Summary statistics summarize and provide information about your sample data. It tells you something about the values in your data set. This includes where the mean lies and whether your data is skewed. Summary statistics fall into three main categories: Measures of location (also called central tendency).
- The data used should be attached and referenced as an appendix to this workbook.

#### **Assessment Criteria**

1.1 Solve equations using mathematical techniques, roots or logarithms.

1.2 Determine the equation of a straight line.

2.1 Create charts and diagrams and plot graphs from accounting data to illustrate financial situations.

2.2 Interpret mathematical graphs of accounting data accurately.

3.1 Explain the difference between quantitative and qualitative data.

3.2 Clearly and accurately represent and interpret business data to provide financial information.

3.3 Clearly and accurately apply and interpret statistics analysis to provide financial information.

|  | Distinguished   | Excellent  | Good   | Proficient  | Basic   | Marginal   | Unacceptable  |
|--|---|--|--|---|---|--|---|
| Criteria   | 80+   | 70   | 60   | 50  | 40  | 30   | 0   |
| Content<br>(alignment with<br>assessment criteria) | Extensive evaluation<br>and synthesis of<br>ideas; includes<br>substantial original<br>thinking   | Comprehensive<br>critical evaluation<br>and synthesis of<br>ideas; includes<br>coherent original<br>thinking       | Adequate<br>evaluation and<br>synthesis of key<br>ideas beyond basic<br>descriptions;<br>includes original<br>thinking   | Describes main<br>ideas with evidence<br>of evaluation;<br>includes some<br>original thinking | Describes some of<br>the main ideas but<br>omits some<br>concepts; limited<br>evidence of<br>evaluation;<br>confused original<br>thinking | Largely incomplete<br>description of main<br>issues; misses key<br>concepts; no<br>original thinking | Inadequate<br>information or<br>containing<br>information not<br>relevant to the topic                          |
| Application of<br>Theory and<br>Literature         | In-depth, detailed<br>and relevant<br>application of<br>theory; expertly<br>integrates literature<br>to support ideas and<br>concept            | Clear and relevant<br>application of<br>theory; fully<br>integrates literature<br>to support ideas and<br>concepts | Appropriate<br>application of<br>theory; integrates<br>literature to support<br>ideas and concepts                       | Adequate<br>application of<br>theory; uses<br>literature to support<br>ideas and concepts     | Limited application<br>of theory; refers to<br>literature but may<br>not use it<br>consistently   | Confused<br>application of<br>theory; does not use<br>literature for<br>support                      | Little or no evidence<br>of application of<br>theory and relevant<br>literature                                 |
| Knowledge and<br>Understanding                     | Extensive depth of<br>understanding and<br>exploration beyond<br>key principles and<br>concepts   | Comprehensive<br>knowledge and<br>depth of<br>understanding key<br>principles and<br>concepts                      | Sound<br>understanding of<br>principles and<br>concepts  | Basic Knowledge<br>and understanding<br>of key concepts and<br>principles                     | Limited and<br>superficial<br>knowledge and<br>understanding of<br>key concepts and<br>principles   | Confused or<br>inadequate<br>knowledge and<br>understanding of<br>key concepts and<br>principles     | Little or no evidence<br>of knowledge or<br>understanding of<br>key concepts and<br>principles                  |
| Presentation and<br>Writing Skills                 | Logical, coherent<br>and polished<br>presentation<br>exceeding<br>expectations at this<br>level; free from<br>errors in mechanics<br>and syntax | Logical, coherent<br>presentation<br>demonstrating<br>mastery; free from<br>errors in mechanics<br>and syntax      | Logical structure to<br>presentation; makes<br>few errors in<br>mechanics and<br>syntax which do not<br>prohibit meaning | Orderly<br>presentation; minor<br>errors in mechanics<br>and syntax                           | Somewhat weak<br>presentation; errors<br>in mechanics and<br>syntax may interfere<br>with meaning   | Confused<br>presentation; errors<br>in mechanics and<br>syntax often<br>interfere with<br>meaning    | Illogical<br>presentation lacking<br>cohesion; contains<br>significant errors<br>that interfere with<br>meaning |
| Referencing  | Advanced use of in-<br>text citation and<br>references  | Mastery of in-text<br>citation and<br>referencing  | Appropriate use of<br>in-text citation and<br>referencing  | Adequate use of in-<br>text citation and<br>referencing                                       | Limited use of in-<br>text citation and<br>referencing  | Inadequate use of<br>citation and<br>referencing   | Little or no evidence<br>of appropriate<br>referencing or use<br>of sources                                     |

#### Instructor's Comments

## **Directions:**

- **1.** For each of the criteria listed in the first column, circle one box in the corresponding column to the right which best reflects the student's work on this particular assessment activity (e.g., project, presentation, essay).
- 2. Provide specific feedback to a student about each of the criteria scores he/she earned by writing comments and suggestions for improvement in the last row titled "Instructor's comments."
- **3.** To arrive at a mark, total the boxes and divide by 5 to arrive at final mark.

Example:

|   |       | Distinguished | Excellent | Good  | Proficient | Basic | Marginal | Unacceptable |
|---|-------|---------------|-----------|-------|------------|-------|----------|--------------|
| F | Range | 80-100        | 70-79     | 60-69 | 50-59      | 40-49 | 35-39    | 0-34         |

| Criteria                             | Score |
|--------------------------------------|-------|
| Content                              | 50    |
| Application of Theory and Literature | 40    |
| Knowledge and Understanding          | 50    |
| Presentation/Writing Skills          | 40    |
| Referencing                          | 40    |

**Total Score** 220/5 = **44**, **Basic** 



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