Unit Title:	**Understanding and applying the fundamentals of business mathematics**
OCR unit number:	C03
Level:	4
Credit value:	10
Guided learning hours:	65
Unit reference number:	R/505/4874

Unit aim and purpose

By completing this unit the learner will understand how to apply the mathematical tools and techniques to solve a range of business problems.

Learning Outcomes	Assessment Criteria
The Learner will:	**The Learner can:**
1 Understand how to apply business mathematical tools and techniques	1.1 Calculate answers to mathematical problems in a business context, including the use of:
	• formulae
	• percentages
	• proportions
	• decimal places or significant figures
	• simple equations
	• linear and quadratic equations
	• simple inequalities
	• probability and expected values
	1.2 Explain the use of probability in decision making where risk and uncertainty exist
	1.3 Apply appropriate techniques to summarise and analyse data
	1.4 Calculate for both grouped and ungrouped data:
	• arithmetic mean
	• median
	• mode
	• range
	• variance
	• standard deviation
	• coefficient of variation
	1.5 Calculate indices and apply indices to a series
	1.6 Apply techniques to determine the relationship(s) between two variables including the use of:

Learning Outcomes	Assessment Criteria
	• (Simple linear) regression • Scatter diagrams • Correlation coefficient calculations • Coefficient of determination calculations • Regression equation calculations 1.7 Apply forecasting techniques to prepare forecasting models including the use of: • time series graphs and models • a moving average • trend equations • seasonal factor calculations for both additive and multiplicative models • predicted value calculations given a time series model 1.8 Identify the limitations of forecasting models 1.9 Apply financial mathematical techniques to calculate: • future values of an investment using both simple and compound interest • an annual percentage rate of interest given a monthly or quarterly rate • the present value of a future cash sum • the present value of an annuity and a perpetuity • loan/mortgage repayments and the value of loan/mortgage outstanding • the future value of regular savings and/or the regular investment needed to generate a required future sum • the net present value (NPV) and the internal rate of return (IRR) of a project 1.10 Explain whether and why a project should be accepted or rejected 1.11 Use spreadsheet software including built in functions to: • present data • construct simple mathematical formulae 1.12 Explain the use of spreadsheet software in business, to include: • Features • Functions • Limitations

Assessment (Updated 2016)

Assessment for this unit is through examinations set by the Chartered Institute of Management Accountants (CIMA).

As of 11 January 2017, the assessment of this unit will be part of CIMA modules BA1, BA2 and BA3. CIMA assessments may not directly assess the assessment criteria indicated below.

1.9   Apply financial mathematical techniques to calculate

- (v) loan/mortgage repayments and the value of loan/mortgage outstanding'

1.12   Explain the use of spreadsheet software in business, to include

- (iii) limitations

If a candidate achieves all of the new modules in the CIMA 2017 syllabus they will be able to claim the OCR qualification.

For candidate who have started the 2011 CIMA syllabus:

- OCR will only issue a full award certificate for the Level 4 Diploma in Business Accounting if the student has achieved the 2011 syllabus, **including unit CO3**, Understanding and applying the fundamentals of business mathematics.

- OCR will not accept a waiver in place of CO3.

For candidates who start the 2017 CIMA syllabus and complete all the new modules in the 2017 syllabus (BA1 – BA4), the learning from CO3 is covered in the new modules.

Candidates can only claim this qualification after they have achieved the Chartered Institute of Management Accountants (CIMA) Certificate in Business Accounting. This is assessed by examination, subject to CIMA conditions.

Evidence requirements

Candidates are required to submit a digital copy of their achievement which will be confirmed by CIMA.

Additional information

For further information regarding administration for this qualification, please refer to the OCR document '*Admin Guide: Vocational Qualifications' (A850)* on the OCR website www.ocr.org.uk .