

15 October 2015

TABLE OF CONTENTS FOR YEAR 11 MATHEMATICS COURSES

YEAR 11 MATHEMATICS APPLICATIONS

CHAPTER 1: EQUATIONS AND FORMULAE

	WACE syllabus reference
A Algebraic substitution	1.2.1
B Linear equations	2.3.1
C Problem solving with linear equations	2.3.2
D Formula substitution	1.2.2, 1.2.3
E Formula rearrangement	

CHAPTER 2: MEASUREMENT

A International System (SI) units	} SACE only
B Scientific notation (standard form)	
C Rounding numbers	
D Estimation and approximation	
E Rates	

CHAPTER 3: INVESTING AND BORROWING

A Financial institutions	
B Simple interest	1.1.5
C Compound interest	1.1.5
D Investment applications	} SACE only
E Tax and inflation	
F Borrowing	

CHAPTER 4: SHARE INVESTMENTS

A Shares	
B Price to earnings (P/E) ratio	1.1.7
C Buying shares	} SACE only
D Selling shares	
E Breakeven price	
F Capital gains	
G Inflation	
H Dividends	1.1.7

CHAPTER 5: CONSUMER ARITHMETIC

A	Employment	1.1.1
B	Government allowances and pensions	1.1.2
C	Budgets	1.1.3
D	Buying and selling	1.1.4, 1.1.5
E	Inflation	1.1.5
F	Foreign currency	1.1.6

CHAPTER 6: PYTHAGORAS' THEOREM

A	Pythagoras' theorem	} 1.3.1
B	Right angles in geometry	
C	The converse of Pythagoras' theorem	
D	Problem solving	
E	Three-dimensional problems	

CHAPTER 7: PERIMETER, AREA, AND VOLUME

A	Length and perimeter	1.3.2
B	Area	1.3.2
C	Areas of irregular shapes	SACE only
D	Surface area	1.3.4
E	Volume	1.3.3
F	Capacity	

CHAPTER 8: SIMILARITY AND SCALE

A	Similarity	1.3.5
B	Similar triangles	1.3.5
C	Problem solving	1.3.6
D	Areas of similar figures	1.3.8
E	Surface areas and volumes of similar solids	1.3.8
F	Scale diagrams	1.3.7

CHAPTER 9: STATISTICS

A	Sampling	
B	Types of data	2.1.2, 2.1.3
C	Displaying categorical data	
D	Displaying numerical data	2.1.4
E	Stem plots	2.1.4
F	Measuring the centre of data	2.1.5, 2.1.11
G	Measuring the spread of data	2.1.11
H	Box-and-whisker plots	2.1.10
I	Standard deviation	2.1.5, 2.1.11, 2.1.12
J	The normal distribution	2.1.6, 2.1.7, 2.1.8, 2.1.9

CHAPTER 10: RIGHT ANGLED TRIANGLE TRIGONOMETRY

A	Labelling right angled triangles	}	2.2.1, 2.2.4
B	The trigonometric ratios		
C	Finding sides and angles		
D	Trigonometry in geometric figures		
E	Problem solving using trigonometry		
F	True bearings		
G	3-dimensional problem solving		

CHAPTER 11: NON-RIGHT ANGLED TRIANGLE TRIGONOMETRY

A	The unit circle	
B	Areas of triangles	2.2.2
C	The cosine rule	2.2.3
D	The sine rule	2.2.3
E	Problem solving	2.2.4

CHAPTER 12: LINEAR FUNCTIONS

A	Linear relationships	
B	Graphing linear relationships	2.3.3, 2.3.4, 2.3.6
C	Linear functions	2.3.3, 2.3.4, 2.3.6
D	Graphing lines from equations	2.3.3, 2.3.4, 2.3.5, 2.3.8
E	Piece-wise linear graphs and step graphs	2.3.9, 2.3.10
F	Linear simultaneous equations	2.3.7
G	Problem solving with simultaneous equations	2.3.8

CHAPTER 13: EXPONENTIAL FUNCTIONS

A	Indices	}	SACE only
B	Exponential functions		
C	Graphs of exponential functions		
D	Exponential equations		
E	Growth and decay		

CHAPTER 14: MATRICES

A	Matrix structure	1.2.4, 1.2.5
B	Matrix operations and definitions	1.2.5, 1.2.6
C	Matrix multiplication	1.2.6
D	Using technology for matrix operations	1.2.6
E	Costing and inventory problems	1.2.7

CHAPTER 15: NETWORKS

- A Networks
- B Number of paths problems
- C Shortest path problems
- D Longest path problems
- E Shortest connection problems
- F Maximum flow problems

} SACE only