Course Outline for MHF4U

Unit 1: Functions: Characteristics and Properties

Approx. # periods: 9

# periods	Topics	Practice Questions
1	1.1 Functions	
1	1.2 Exploring Absolute Value	
1	1.3 Properties of Graphs of Functions	
2	1.4 Sketching Graph of Functions	
1	1.5 Inverse Functions	
1	1.6 Piecewise Functions	
2	Review & Evaluation	

Unit 2: Polynomial Functions

Approx. # periods: 12

# periods	Topics	Practice Questions
1	3.1 Exploring Polynomial Functions	
1	3.2 Characteristics of Polynomial Functions	
1	3.3 Characteristics of Polynomial Functions in Factored Form	
1	3.5 Dividing Polynomials (Long Division)	
1	3.5 Dividing Polynomials (Synthetic Division)	
2	3.6 Remainder Theorem	
2	3.6 Factor Theorem	
1	3.7 Factoring a Sum or Difference of Cubes	
2	Review & Evaluation	

Unit 3: Polynomial Equations and Inequalities

Approx. # periods: 9

# periods	Topics	Practice Questions
2	4.1 Solving Polynomial Equations	
2	4.2 Solving Linear Inequalities	
3	4.3 Solving Polynomial Inequalities	
2	Review & Evaluation	

Unit 4: Rational Functions, Equations and Inequalities
Approx. # periods: 9

# periods	Topics	Practice Questions
1	5.1 Reciprocal Functions	
1	5.3 Asymptotes	
2	5.3 Graphs of Rational Functions	
1	5.4 Solving Rational Equations	
2	5.5 Solving Rational Inequalities	
2	Review & Evaluation	

Unit 5: Trigonometric Functions
Approx. # periods: 13

# periods	Topics	Practice Questions
1	Review of Grade 11	
1	6.1 Radian Measure	
2	6.2 Trigonometric Functions of Angles in Radians	
2	6.3 Graphs of the Trigonometric Functions	
3	6.4 Transformations of Trigonometric Functions	
1	6.5 Graphs of Reciprocal Trigonometric Functions	
1	6.6 Modelling with Trigonometric Functions	
2	Review & Evaluation	

Unit 6: Trigonometric Identities and Equations
Approx. # periods: 12

# periods	Topics	Practice Questions
1	7.1 Related and Corelated Angles	
1	7.2 Compound Angle Formula	
2	7.3 Double Angle Formulas	
3	7.4 Trig Identities	
1	7.5 Linear Trig Equations	
2	7.6 Quadratic Trig Equations	
2	Review & Evaluation	

Unit 7: Exponential and Logarithmic Functions
Approx. # periods: 10

# periods	Topics	Practice Questions
1	8.1 Exploring Logarithmic Function	
1	8.2 Transformation of Log Functions	
1	8.3 Evaluating Logarithms	
2	8.4 Laws of Logarithms	
1	8.5 Solving Exponential Equations	
1	8.6 Solving Logarithmic Equations	
1	8.7 Solving Exp and Log Function Problems	
2	Review & Evaluation	

Unit 8: Combinations of Functions
Approx. # periods: 6

# periods	Topics	Practice Questions
3	9.1-9.4 Combination of Functions	
1	9.5 Composition of Functions	
2	Review & Evaluation	

Total # periods: 80