

Chapter 1: Algebraic methods: Chapter 1: Algebraic methods

P1 I can use proof by contradiction to prove true statements			
P2 I can multiply and divide two or more algebraic fractions			
P3 I can add or subtract two or more algebraic fractions			
P4 I can convert an expression with linear factors in the denominator into partial fractions			
P5 I can convert an expression with repeated linear factors in the denominator into partial fractions			
P6 I can divide algebraic expressions			
P7 I can convert an improper fraction into partial fraction form			

Chapter 2: Functions and graphs: Chapter 2: Functions and graphs

P8 I can understand and use the modulus function			
P9 I can understand mappings and functions, and use domain and range			
P10 I can combine two or more functions to make a composite function			
P11 I know how to find the inverse of a function graphically and algebraically			
P12 I can sketch the graphs of the modulus functions			
P13 I can apply a combination of two (or more) transformations to the same curve			
P14 I can transform the modulus function			

Chapter 3: Sequences and series: Chapter 3: Sequences and series

P15 I can find the nth term of an arithmetic sequence			
P16 I can prove and use the formula for the sum of the first n terms of an arithmetic series			
P17 I can find the nth term of a geometric sequence			
P18 I can prove and use the formula for the sum of a finite geometric series			
P19 I can prove and use the formula for the sum to infinity of a convergent geometric series			
P20 I can use sigma notation to describe series			
P21 I can generate sequences from recurrence relations			
P22 I can model real-life situations with sequences and series			

Chapter 4: Binomial expansion: Chapter 4: Binomial expansion

P23 I can expand $(1 + x)^n$ for any rational constant n and determine the range of values of x for which the expansion is valid			
P24 I can expand $(a + bx)^n$ for any rational constant n and determine the range of values of x for which the expansion is valid			
P25 I can use partial fractions to expand fractional expressions			

Chapter 5: Radians: Chapter 5: Radians

P26 I can convert between degrees and radians and apply this to trigonometric graphs and their transformations			
P27 I know exact values of angles measured in radians			
P28 I can find an arc length using radians			
P29 I can find areas of sectors and segments using radians			
P30 I can solve trigonometric equations in radians			
P31 I can use approximate trigonometric values when the angle is small			

Chapter 6: Trigonometric functions: Chapter 6: Trigonometric functions

P32 I can understand the definitions of secant, cosecant and cotangent and their relationship to cosine, sine and tangent			
P33 I can understand the graphs of secant, cosecant and cotangent and their domain and range			
P34 I can simplify expressions, prove simple identities and solve equations involving secant, cosecant and cotangent			
P35 I can prove and use the further trigonometric identities			
P36 I can understand and use inverse trigonometric functions and their domain and ranges			

Chapter 7: Trigonometry and modelling: Chapter 7: Trigonometry and modelling

P37 I can prove and use the addition formulae			
P38 I can understand and use the double-angle formulae			
P39 I can solve trigonometric equations using the double-angle and addition formulae			
P40 I can write expressions of the form $a \cos x + b \sin x$ in the forms $R \cos(x + \alpha)$ etc			
P41 I can prove trigonometric identities using a variety of identities			
P42 I can use trigonometric functions to model real-life situations			

Chapter 8: Parametric equations: Chapter 8: Parametric equations

P43 I can convert parametric equations into Cartesian form by substitution			
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P44 I can convert parametric equations into Cartesian form using trigonometric identities			
P45 I can understand and use parametric equations of curves and sketch parametric curves			
P46 I can solve coordinate geometry problems involving parametric equations			
P47 I can use parametric equations in modelling in a variety of contexts			

Chapter 9: Differentiation: Chapter 9: Differentiation

P48 I can differentiate trigonometric functions			
P49 I can differentiate exponentials and logarithms			
P50 I can differentiate functions using the chain, product and quotient rules			
P51 I can differentiate parametric equations			
P52 I can differentiate functions which are defined implicitly			
P53 I can use the second derivative to describe the behaviour of a function			
P54 I can solve problems involving connected rates of change and construct simple differential equations			

Chapter 10: Numerical methods: Chapter 10: Numerical methods

P55 I can locate roots of $f(x) = 0$ by considering changes of sign			
P56 I can use iteration to find an approximation to the root of the equation $f(x) = 0$			
P57 I can use the Newton-Raphson procedure to find approximations to the solutions of equations of the form $f(x) = 0$			
P58 I can use numerical methods to solve problems in context			

Chapter 11: Integration: Chapter 11: Integration

P59 I can integrate standard mathematical functions including trigonometric and exponential functions and use the reverse of the chain rule to integrate functions of the form $f(ax + b)$			
P60 I can use trigonometric identities in integration			
P61 I can use the reverse of the chain rule to integrate more complex functions			
P62 I can integrate functions by making a substitution, using integration by parts and using partial fractions			
P63 I can use integration to find the area under a curve			
P64 I can use the trapezium rule to approximate the area under a curve			
P65 I can solve simple differential equations and model real-life situations with differential equations			

Chapter 12: Vectors: Chapter 12: Vectors

P66 I can understand 3D Cartesian coordinates			
P67 I can use vectors in three dimensions			
P68 I can use vectors to solve geometric problems			
P69 I can model 3D motion in mechanics with vectors			

Date:

Student Reflection:

Teacher Comment: