

HIGHER MATHEMATICS

RECORD OF ACHIEVEMENT FOR:

RESULTS OVERVIEW

UNIT	1.1	1.2	1.3	1.4
Expressions & Functions				
Relationships & Calculus				
Applications				

2.1	2	
2.2	2	

Expressions and Functions

Assessment standard	skill	BLOCK 1	BLOCK 2	BLOCK 3	BLOCK 4	BLOCK 5	TOTAL/ RESULT
1.1 Applying algebraic skills to logarithms and exponentials	<ul style="list-style-type: none"> simplifying a numerical expression, using the laws of logarithms and exponents solving logarithmic and exponential equations, using the laws of logarithms and exponents 					$\frac{1}{3}$ Q8 $\frac{1}{2}$ Q9	$\frac{3}{5}$ P/F Date:
1.2 Applying trigonometric skills to manipulating expressions	<ul style="list-style-type: none"> applying the addition or double angle formulae applying trigonometric identities converting $a\cos x + b\sin x$ to $k\cos(x \pm \alpha)$ or $k\sin(x \pm \alpha)$, a in 1st quad $k > 0$ 				$\frac{1}{3}$ Q4 $\frac{1}{2}$ Q5 $\frac{1}{4}$ Q6		$\frac{5}{9}$ P/F Date:
1.3 Applying algebraic and trigonometric skills to functions	<ul style="list-style-type: none"> identifying and sketching related algebraic functions identifying and sketching related trigonometric functions determining composite and inverse functions 		$\frac{1}{3}$ Q4 $\frac{1}{2}$ Q5 $\frac{1}{3}$ Q7 $\frac{1}{4}$ Q6 $\frac{1}{2}$ Q8(a) $\frac{1}{3}$ Q9				$\frac{9}{17}$ P/F Date:
1.4 Applying geometric skills to vectors	<ul style="list-style-type: none"> Determine the resultant vector pathway in 3D Work with collinearity Determine the coordinates of an internal division point of a line Evaluate a scalar product given suitable information and determining the angle between two vectors 	$\frac{1}{2}$ Q1 $\frac{1}{2}$ Q2 $\frac{1}{3}$ Q3 $\frac{1}{5}$ Q4					$\frac{7}{12}$ P/F Date:
2.1	#2.1 Interpreting a situation where mathematics can be used and identifying a valid strategy	$\frac{1}{1}$ Q2			$\frac{1}{1}$ Q5		
2.2	#2.2 Explaining a solution and, where appropriate, relating it to context	$\frac{1}{1}$ Q2	$\frac{1}{1}$ Q8(b)				

Relationships & Calculus

Assessment standard	skill	BLOCK 1	BLOCK 2	BLOCK 3	BLOCK 4	BLOCK 5	TOTAL/ RESULT
1.1 Applying algebraic skills to solve equations	<ul style="list-style-type: none"> factorising and solving a cubic polynomial expression with unitary x^3 coefficient given the nature of the roots of an equation, use the discriminant to find an unknown 		$\frac{1}{15}$ $\frac{1}{31}$				$\frac{4}{6}$ P/F Date:
1.2 Applying trigonometric skills to solve equations	<ul style="list-style-type: none"> solving trigonometric equations in degrees, including those involving trigonometric formulae or identities, in a given interval 				$\frac{1}{13}$ $\frac{1}{24}$ $\frac{1}{33}$		$\frac{6}{10}$ P/F Date:
1.3 Applying calculus skills of differentiation	<ul style="list-style-type: none"> differentiating an algebraic function which is, or can be simplified to, an expression in powers of x differentiating $k \sin x$, $k \cos x$ determining the equation of a tangent to a curve at a given point by differentiation 			$\frac{1}{33}$ $\frac{1}{4}$ $\frac{1}{2}$ $\frac{1}{51}$ $\frac{1}{64}$			$\frac{6}{10}$ P/F Date:
1.4 Applying calculus skills of integration	<ul style="list-style-type: none"> integrating an algebraic function which is, or can be, simplified to an expression of powers of x integrating functions of the form $f(x) = (x+q)^n$, $n \neq -1$ integrating functions of the form $f(x) = p \cos x$ and $f(x) = p \sin x$ calculating definite integrals of polynomial functions with integer limits 					$\frac{1}{14}$ $\frac{1}{22}$ $\frac{1}{31}$ $\frac{1}{43}$	$\frac{6}{10}$ P/F Date:
2.1	#2.1 Interpreting a situation where mathematics can be used and identifying a valid strategy		$\frac{1}{31}$				
2.2	#2.2 Explaining a solution and, where appropriate, relating it to context		$\frac{1}{21}$				

Applications

Assessment standard	skill	BLOCK 1	BLOCK 2	BLOCK 3	BLOCK 4	BLOCK 5	TOTAL/ RESULT
1.1 Applying algebraic skills to rectilinear shapes	<ul style="list-style-type: none"> finding the equation of a line parallel to, and a line perpendicular to, a given line using $m = \tan \theta$ to calculate a gradient or angle 	$\frac{5}{2}$ $\frac{6}{1}$ Q5 $\frac{2}{1}$ Q6 $\frac{1}{1}$ Q7(a) $\frac{1}{1}$					$\frac{3}{4}$ P/F Date:
1.2 Applying algebraic skills to circles	<ul style="list-style-type: none"> determining and using the equation of a circle using properties of tangency in the solution of a problem 			$\frac{1}{1}$ $\frac{3}{3}$ Q1 $\frac{1}{1}$ Q2 $\frac{3}{3}$			$\frac{3}{4}$ P/F Date:
1.3 Applying algebraic skills to sequences	<ul style="list-style-type: none"> determining a recurrence relation from given information and using it to calculate a required term finding and interpreting the limit of a sequence, where it exists 					$\frac{4}{4}$ Q10 $\frac{4}{4}$ $\frac{4}{4}$ Q11 $\frac{4}{4}$	$\frac{5}{8}$ P/F Date:
1.4 Applying calculus skills to optimisation and area	<ul style="list-style-type: none"> finding the area between a curve and the x-axis finding the area between two curves or a straight line and a curve determining the optimal solution for a given problem 					$\frac{4}{4}$ Q5 $\frac{4}{4}$ $\frac{5}{5}$ Q6 $\frac{5}{5}$ $\frac{5}{5}$ Q7 $\frac{5}{5}$	$\frac{8}{14}$ P/F Date:
2.1	#2.1 Explaining a solution and, where appropriate, relating it to context	$\frac{1}{1}$ Q6 $\frac{1}{1}$		$\frac{1}{1}$ Q1 $\frac{1}{1}$		$\frac{1}{1}$ Q5 $\frac{1}{1}$	
2.2	#2.2 Explaining a solution and, where appropriate, relating it to context	$\frac{1}{1}$ Q7(b) $\frac{1}{1}$		$\frac{1}{1}$ Q2 $\frac{1}{1}$			