

Higher Pupil Record Sheet- Unit 1

Expressions 1.1 Logs and Exponentials	NS	OT	VG
Evaluating exponential functions			
Converting between logarithmic and exponential form			
Simplifying expressions using laws of logs			
Simplifying expressions using natural logs and e			
Solving log equations using the laws of logs			
Exponential growth or decay - solving exponential equations using \log_e			
Use logs to find the equations of functions in the form $y = kx^n$ or $y = ab^x$			
L&L Higher Ch 1 P 2 - 22			
Expressions 1.2 Trigonometric Expressions	NS	OT	VG
The exact value ratios for 30° , 45° , 60° and 90°			
Convert between degrees and radians			
The exact value trigonometric ratios in radians			
Addition formulae for the sum and difference of two angles			
Double angle formulae			
Trigonometric identities			
Wave Function			
L&L Higher Ch 2 P 23 – 52			
Expressions 1.3 Related Functions	NS	OT	VG
Identifying and sketching related functions			
Transformations of functions – $af(x)$, $f(bx)$ $f(x) + c$ and $f(x + d)$			
Completing the square to find min/max values and sketch functions			
Sketching graphs of exponential and logarithmic functions			
Sketching graphs of trigonometric functions and identifying min/max values			
Sketch the graph of the derived function $y = f'(x)$			
Composite and inverse functions			
Identify the range and the domain of a function			
Identify any restrictions on the domain and state largest possible domain			
Find a formula for a composite function $f(g(x))$			
Find a formula for the inverse of a linear function			
L&L Higher Ch 3 P 53 – 82, Ch 4 P 83 – 91			
Expressions 1.4 Vectors	NS	OT	VG
Vector connections			
Vector properties, unit vectors i , j and k and position vectors			
Calculate the coordinates of an internal division point of a line			
Find vector pathways			
Work with parallel vectors and collinearity			
Working with vectors			
Calculate the scalar product of two vectors			
Calculate the angle between two vectors using the scalar product			
Work with perpendicular vectors			
The distributive law and the scalar product			
L&L Higher Ch 5 P 92 - 113 , Ch 6 P 114 - 131			