Higher Maths - Topic Checklist

Expressions & Functions

1.1a	simplifying expression using laws of logs and exponentials									
1.1b	solving log/exponential eqns using laws of logs/exponentials									
1.2a	applying the addition or double angle formulae									
1.2b	applying trigonometric identities									
1.2c	converting acosx+bsinx to kcos/sin(x+/-a), a in 1st quad, k>0									
1.3a	identifying and sketching related algebraic functions									
1.3b	identifying and sketching related trigonometric functions									
1.3c	determining composite&inverse functions inc basic domain/range									
1.4a	determining the resultant of vector pathways in three dimensions									
1.4b	working with collinearity									
1.4c	determining the coordinates of an internal division point of a line									
1.4d	evaluating scalar product and determining angle between 2 vectors									

Relationships & Calculus

1.1a	factorising a cubic polynomial with unitary coefficient of cube term									
1.1b	solving cubic polynomial equations with unitary cube coefficient									
1.1c	given nature of roots, use discriminant to find an unknown									
1.2a	solve trig equations in deg, using trig formulae in a given interval									
1.3a	differentiating algebraic function which is/can be simp to power of x									
1.3b	differentiating ksinx, kcosx									
1.3c	determining the eqn of a tangent to a curve at a given point by diff									
1.4a	integrating an algebraic function which is/can be simp to power of x									
1.4b	integrating functions of the form $f(x)=(x+q)^n$, n not equal to -1									
1.4c	integrating functions of the form f(x)=pcos/sinx									

Applications

1.1a	finding the eqn of a line parallel to & perpendicular to a given line									
1.1b	using m=tanθ to calculate a gradient or angle									
1.2a	determining and using the equation of a circle									
1.2b	using properties of tangency in the solution of a problem									
1.3a	determining a recurrence relation and using to find reqd term									
1.3b	finding and interpreting the limit of a sequence, where it exists									
1.4a	determining the optimal solution for a given solution									
1.4b	finding the area between a curve and the x-axis									
1.4c	find the area between two curves or straight line and curve									