

YEAR 12 - MATHEMATICS

HSC Topic 7 – Introduction to Vectors

MATHEMATICS EXTENSION 1

LEARNING PLAN

Learning Intentions Student is able to:	Learning Experiences Implications, considerations and implementations:	Success Criteria I can:	Resources
define a vector as a quantity having both magnitude and direction, and examine examples of vectors, including displacement and velocity.	explain the distinction between a position vector and a displacement (relative) vector.	Define a vector as a quantity having both magnitude and direction. I can give examples including displacement and velocity.	
define and use a variety of notations and representations for vectors in two dimensions.	– use standard notations for vectors, for example: $\underline{a}$, $\vec{AB}$ and a – represent vectors graphically in two dimensions as directed line segments – define unit vectors as vectors of magnitude 1, and the standard two-dimensional perpendicular unit vectors $\underline{i}$ and $\underline{j}$	I can use a variety of notation to represent vectors in 2 dimensions.	

	– express and use vectors in two dimensions in a variety of forms, including component form, ordered pairs and column vector notation		
perform addition and subtraction of vectors and multiplication of a vector by a scalar algebraically and geometrically, and interpret these operations in geometric terms	– graphically represent a scalar multiple of a vector – use the triangle law and the parallelogram law to find the sum and difference of two vectors – define and use addition and subtraction of vectors in component form – define and use multiplication by a scalar of a vector in component form	Perform addition and subtraction of vectors. Perform multiplication of vectors	Addition constructions Is addition of vectors cumulative? Scalar multiplication display
Past HSC Questions			

Established Goals (Syllabus Outcomes): ME12-2, ME12-6, ME12-7

Estimated Time: 1 Week

ASSESSMENT

Performance Tasks: (Linked to Essential Questions)	Other Evidence:
---	------------------------