-	What students need to learn:				
горіс	Conte	nt	Guidance		
2	2 1	Add subtrast and			
) Matrices	5.1	multiply			
		conformable matrices.			
		Multiply a matrix			
		by a scalar.			
	3.2	Understand and use zero and			
		identity matrices.			

	What students need to learn:			
Торіс	Content		Guidance	
3 Matrices continued	3.3	Use matrices to represent linear transformations in 2-D. Successive transformations. Single transformations in 3-D.	For 2-D, identification and use of the matrix representation of single and combined transformations from: reflection in coordinate axes and lines $y = \pm x$, rotation through any angle about $(0, 0)$, stretches parallel to the <i>x</i> -axis and <i>y</i> -axis, and enlargement about centre $(0, 0)$, with scale factor <i>k</i> , $(k \neq 0)$, where $k \in \mathbb{R}$. Knowledge that the transformation represented by AB is the transformation represented by B followed by the transformation represented by B followed by the transformation represented to reflection in one of $x = 0, y = 0, z = 0$ or rotation about one of the coordinate axes. Knowledge of 3-D vectors is assumed.	
	3.4	Find invariant points and lines for a linear transformation.	For a given transformation, students should be able to find the coordinates of invariant points and the equations of invariant lines.	
	3.5	Calculate determinants of 2 x 2 and 3 x 3 matrices and interpret as scale factors, including the effect on orientation.	Idea of the determinant as an area scale factor in transformations.	
	3.6	Understand and use singular and non-singular matrices. Properties of inverse matrices.	Understanding the process of finding the inverse of a matrix is required.	
		Calculate and use the inverse of non-singular 2 x 2 matrices and 3 x 3 matrices.	Students should be able to use a calculator to calculate the inverse of a matrix.	

Торіс	What students need to learn:				
	Content		Guidance		
3 Matrices continued	3.7	Solve three linear simultaneous equations in three variables by use of the inverse matrix.			
	3.8	Interpret geometrically the solution and failure of solution of three simultaneous linear equations.	Students should be aware of the different possible geometrical configurations of three planes, including cases where the planes, (i) meet in a point (ii) form a sheaf (iii) form a prism or are otherwise inconsistent		