

SCHEME OF WORK FORM FOUR MATHEMATICS TERM ONE YEAR 2018							
WK NO.	L/NO	TOPIC / SUBTOPIC	LESSON / SPECIFIC OBJECTIVES	TEACHING / LEARNING ACTIVITIES	MATERIALS / RESOURCES	REFERE-NCES	REMARKS
1	1	MATRICES & TRANSFORMATIONS Definition of a transformation. Reflection in the y-axis.	By the end of the lesson, the learner should be able to: Define a transformation. Obtain image of an object by reflection in the y-axis.	Questioning to review position vectors; Drawing objects and their images on the Cartesian plane; Inferring the matrix of transformation for reflection in the y-axis. Written exercise.	Geo – board, Graph papers, mirrors.	KLB BK IV Pgs 1-2	
	2	Reflection in the x-axis.	Obtain image of an object by reflection in the x-axis.	Drawing object and image on the Cartesian plane; Inferring the matrix of transformation for reflection in the x-axis. Written exercise.	Geo – board, Graph papers, mirrors.	KLB BK IV Pgs 2 - 3	
	3	Reflection in the Lines $y = x$, $y = -x$ and other lines.	Obtain image of an object by reflection in a given line. Obtain the object given its image and line of reflection.	Review equation of a line; Draw the line $y = x$; Reflect an object in the line $y = x$; Infer the matrix of transformation Written exercise.	Geo – board, Graph papers, mirrors.	KLB BK IV Pgs 2-3	
	4	Rotation matrix. (positive angle)	Obtain image of an object by rotation through a positive angle. Obtain the object given its image and positive rotation angle.	Guided discovery; Worked example; Written exercise.	Geo – board, Graph papers.	KLB BK IV Pgs 3-4	
	5	Rotation matrix. (negative angle)	Obtain image of an object by rotation through a negative angle.	Guided discovery; Worked example; Written exercise.	Geo – board, Graph papers.	KLB BK IV Pgs 3-4	

	6	The unit circle.	Use the unit circle to identify a transformation represented by a given matrix.	Guided discovery; Worked example; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 9-13</i>	
	7	Finding matrix of transformation.	Find matrix of transformation given an object and image. Describe the transformation fully.	Review simultaneous equations and matrix multiplication; Worked examples; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 6-8</i>	
2	1	Enlargement matrix.	Identify an enlargement matrix. Perform operations involving enlargement matrices.	Review scale factor and centre of enlargement; Worked examples; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 11-12</i>	
	2	Two successive transformations.	Perform two successive transformations.	Guided discovery of order of operation; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 16-17</i>	
	3	Several successive transformations.	Perform several successive transformations.	Previous exercise review; Guided discovery of order of operation; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 16-17</i>	
	4	Combined matrix of transformations.	Find combined matrix of several transformations.	Previous exercise review; Guided discovery of order of operation; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 21-22</i>	
	5	Inverse of a transformation matrix.	Identify the identity matrix. Determine the inverse of a transformation matrix.	Worked examples using several methods; Supervised practice; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 24-26</i>	
	6	Inverse of several transformation matrices.	Determine the inverse of several combined transformation matrices.	Worked; Supervised practice; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 24-26</i>	
	7	A.S.F. and determinant of a transformation matrix.	State the relation between A.S.F. and determinant of a transformation matrix.	Finding area of object, image, ASF; Guided discovery; Written exercise.	Geo – board, Graph papers.	<i>KLB BK IV Pgs 26-27</i>	

3	1	Shear transformation. (x-axis invariant)	Identify a shear transformation. (x-axis invariant) Describe a shear fully.	Drawing object and image under a shear transformation; Oral exercise; Written exercise.	Geo - board, Graph papers.	<i>KLB BK IV Pgs 28-32</i>	
	2	Shear transformation. (y-axis invariant)	Identify a shear transformation. (y-axis invariant) Describe a shear fully.	Drawing object and image under a shear transformation; Oral exercise; Written exercise.	Geo - board, Graph papers.	<i>KLB BK IV Pgs 28-31</i>	
	3	Finding shear matrix.	Find shear matrix given the object and image.	Worked examples; Written exercise.	Geo - board, Graph papers.	<i>KLB BK IV Pgs 31-2</i>	
	4	One-way stretch. (x-axis invariant)	Describe a one-way stretch. (x-axis invariant) Find the scale factor of a stretch.	Guided discovery; Worked examples and discussion.	Geo - board, Graph papers.	<i>KLB BK IV Pgs 32-34</i>	
	5	One-way stretch. (y-axis invariant)	Describe a one-way stretch. (y-axis invariant). Find the scale factor of a stretch.	Guided discovery; Worked examples and discussion.	Geo - board, Graph papers.	<i>KLB BK IV Pgs 32-34</i>	
	6	Isometric and non-isometric transformation.	Classify transformations as either isometric or non-isometric.	Review types of transformations; Probing questions on size and shape of objects and images.		<i>KLB BK IV Pg 35</i>	
	7	Test / mixed exercise.			Past exam papers.		
4	1	STATISTICS II Mean and assumed mean. (frequency 1)	Find mean of ungrouped data using an assumed mean. (frequency 1)	Simple worked examples; Exposition of method involving an assumed mean; Written exercise.	Calculator.	<i>KLB BK IV Pgs 38-39</i>	

	2	Mean and assumed mean. (frequency > 1)	Find mean of ungrouped data using an assumed mean. (frequency > 1)	Simple worked examples; Written exercise.	Calculator.	<i>KLB BK IV Pg 40</i>	
	3	Mean of grouped data.	Find mean of grouped data.	Review previous exercise; Completing table; Worked examples.	Calculator.	<i>KLB BK IV Pgs 40-41</i>	
	4	Mean of grouped data. (alternative methods)	Find mean of grouped data. (alternative methods)	Completing table; Worked examples. Written exercise.	Calculator.	<i>KLB BK IV Pgs 40-46</i>	
	5	Median.	Find median of grouped data.	Worked examples; Written exercise.	Calculator.	<i>KLB BK IV Pgs 46-7</i>	
	6	Quartiles.	Find upper and lower quartiles.	Exposition; Worked examples; Written exercise.	Calculator.	<i>KLB BK IV Pgs 47-8</i>	
	7	Deciles and Percentiles.	Define a decile and percentile. Find n th decile / percentile.	Exposition; Worked examples; Written exercise.	Calculator.	<i>KLB BK IV Pgs 47-8</i>	
5	1	Cumulative frequency curve.	Draw a cumulative frequency curve.	Q/A to review upper and lower limits of class boundaries; Complete a table by finding cumulative totals; Draw an ogive.	Calculator, graph papers.	<i>KLB BK IV Pgs 38-40</i>	
	2	Median and quartiles from an ogive.	Estimate median and quartiles from an ogive.	Probing questions to make inferences from an ogive.	Calculator, graph papers.	<i>KLB BK IV Pgs 48-50</i>	
	3	Deciles and percentiles from an ogive.	Estimate deciles and percentiles from an ogive.	Probing questions to make inferences from an ogive.	Calculator, graph papers.	<i>KLB BK IV Pgs 53-55</i>	

	4	Range, inter-quartile range and quartile deviation.	Find range and inter-quartile range of a set of data.	Exposition and oral exercise.	Calculator.	<i>KLB BK IV Pgs 55-56</i>	
	5	Mean absolute deviation.	Determine mean absolute deviation.	Exposition; Worked examples.	Calculator.	<i>KLB BK IV Pgs 56-7</i>	
	6	Variance.	Define variance. Determine variance of a set of data.	Exposition; Worked examples.	Calculator.	<i>KLB BK IV Pgs 57-59</i>	
	7	Standard deviation.	Determine standard deviation of a set of data.	Exposition; Worked examples; Written exercise.	Calculator.	<i>KLB BK IV Pgs 59-60</i>	
6	1-4	Formulae for standard deviation.	Use various methods of finding std deviation.	Exposition; Worked examples; Written exercise.	Calculator.	<i>KLB BK IV Pgs 60-3</i>	
	5	LOCI Definition of a locus.	Define locus of a point.	Illustrative examples; Exposition of meaning of locus of a point.	Door, clock, see saw, etc.	<i>KLB BK IV Pgs 66-7</i>	
	6	Sketching locus of a point.	Sketch locus of a point.	Oral exercise; Supervised practice; Written exercise.		<i>KLB BK IV Pgs 67-8</i>	
	7	Perpendicular bisector locus. (two dimensions)	Describe perpendicular bisector locus. (two dimensions)	Geometrical construction; Guided discovery; Written exercise.	Geometrical sets.	<i>KLB BK IV Pgs 68-9</i>	
7	1	Perpendicular bisector locus. (three dimensions)	Describe perpendicular bisector locus. (three dimensions)	Geometrical construction; Guided discovery; Supervised practice; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 69</i>	

	2	Locus of points at a given distance from a fixed point. (two dim)	Describe locus of points at a given distance from a fixed point.	Geometrical construction; Guided discovery; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 70</i>	
	3	Locus of points at a given distance from a fixed point. (three dim)	Describe locus of points at a given distance from a fixed point.	Geometrical construction; Guided discovery; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 71</i>	
	4	Locus of points at a given distance from a line. (two dim)	Describe locus of points at a given distance from a fixed point.	Geometrical construction; Guided discovery; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 69</i>	
	5	Locus of points at a given distance from a line. (three dim)	Describe locus of points at a given distance from a fixed point.	Geometrical construction; Guided discovery; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 70</i>	
	6	Angle bisector locus.	Construct the angle bisector locus.	Geometrical construction; Guided discovery; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 70</i>	
	7	Constant angle locus.	Construct constant angle locus.	Probing questions to review angle properties of a circle; Geometrical construction; Guided discovery; Written exercise.	Geometrical sets.	<i>KLB BK IV Pgs 72-4</i>	
8	1	Constant angle locus. (contd)	Construct constant angle locus.	Probing questions to review previous exercise; Geometrical construction; Guided discovery; Written exercise.	Geometrical sets.	<i>KLB BK IV Pgs 72-4</i>	

	2	Intersecting loci involving lines and angles.	Construct intersecting loci involving lines and angles.	Geometrical construction; Supervised practice; Written exercise.	Geometrical sets.	<i>KLB BK IV Pgs 72-4</i>	
	3	Circumcircle locus.	Construct a circumcircle.	Geometrical construction; Supervised practice; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 78</i>	
	4	In-circle locus.	Construct an in-circle locus.	Geometrical construction; Supervised practice; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 78</i>	
	5	Ex-circle locus.	Construct an ex-circle locus.	Geometrical construction; Supervised practice; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 78</i>	
	6	Intersecting loci in plane figures.	Construct intersecting loci in plane figures.	Problem solving.	Geometrical sets.	<i>KLB BK IV Pgs 79-81</i>	
	7	Loci of inequalities.	Draw locus of points that satisfy various inequalities.	Q/A to review simple and compound inequalities; Worked examples; Written exercise.	Geometrical sets.	<i>KLB BK IV Pgs 81-2</i>	
9	1	Loci of inequalities. (contd)	Draw locus of points that satisfy various inequalities.	Review previous exercise; Further worked examples; Written exercise.	Geometrical sets.	<i>KLB BK IV Pg 83</i>	
	2	Locus involving chords.	Construct locus involving chords.	Worked examples; Written exercise.	Geometrical sets.	<i>KLB BK IV Pgs 96-97</i>	
	3	TRIGONOMETRY III Some trigonometric ratios.	Rearrange trigonometric expressions.	Exposition and worked examples; Written exercise.	Geometrical sets.	<i>KLB BK IV Pgs 90-91</i>	
	4	Trigonometric identities.	Prove some trigonometric identities.	Problem solving.	Geometrical sets.	<i>KLB BK IV Pgs 100-1</i>	

	5	Period and amplitude of waves.	Determine period and amplitude of waves.	Exposition and worked examples.	Geometrical sets.	<i>KLB BK IV 94-5</i>	
	6	Tables for trigonometric functions.	Complete tables for trigonometric functions.	Exposition and worked examples.	Calculator.	<i>KLB BK IV Pgs 96-7</i>	
	7	Graphs for trig. functions.	Plot graphs for trigonometric functions.	Drawing graphs; supervised practice; make inferences from the graphs.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 96-7</i>	
10	1	Further graphs for trig. functions.	Plot graphs for trigonometric functions.	Drawing graphs; supervised practice; make inferences from the graphs.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 96-7</i>	
	2	Transformations of waves.	Describe some transformations of waves.	Supervised practice; Exposition and worked examples; Written exercise.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 96-97</i>	
	3	Waves with a phase angle. (positive)	Determine the phase angle (positive) for two waves.	Guided discovery; Written exercise.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 97-8</i>	
	4	Waves with a phase angle. (negative)	Determine the phase angle (negative) for two waves.	Guided discovery; Written exercise.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 97-8</i>	
	5	Trigonometric equations.	Solve trigonometric equations.	Q/A to review trig. ratios for complementary angles; Worked examples; Supervised practice; Written exercise.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 100-3</i>	
	6	Further trig. equations.	Solve trigonometric equations.	Exercise review; Problem solving.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 100-3</i>	
	7	Graph of a trig. function and a line.	Draw the graph of a trig. function and a line to solve an equation.	Worked examples; Supervised practice; Written exercise.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 100-3</i>	

11	1	Graphs of two trig. functions.	Draw graphs of two trig. functions to solve some equations.	Worked examples; Supervised practice; Written exercise.	Geometrical sets, graph papers.	<i>KLB BK IV Pgs 100-3</i>	
	2	THREE DIMENSIONAL GEOMETRY Dimensions of figures.	State the dimensions of figures. Identify faces, edges, and vertices of common figures.	Probing questions; Oral exercise.	Common planes and solids.	<i>KLB BK IV Pgs 104-6</i>	
	3	Angle between a line and a plane.	Identify the angle between a line and a plane.	Exposition; Oral exercise.	Cuboid wire mesh.	<i>KLB BK IV Pgs 106-7</i>	
	4	Finding the angle between a line and a plane.	Find the angle between a line and a plane.	Guided discovery; Worked examples; Written exercise.	Models of solids.	<i>KLB BK IV Pgs 107-113</i>	
	5	Finding the angle between a line and a plane. (contd)	Find the angle between a line and a plane.	Problem solving.	Models of solids.	<i>KLB BK IV Pgs 107-113</i>	
	6	Angle between two planes.	Identify the angle between two planes.	Q/A counting planes; Exposition.	Models of solids.	<i>KLB BK IV Pgs 113-118</i>	
	7	Angle between two planes. (contd)	Find the angle between two planes.	Exposition; Guided discovery; Worked examples; Written exercise.	Models of solids.	<i>KLB BK IV Pgs 113-118</i>	
12 13		END OF TERM EXAMS					

SCHEME OF WORK FORM FOUR MATHEMATICS TERM TWO YEAR 20.....							
1	1	Angle between two planes. (contd)	Find the angle between two planes.	Problem solving.	Models of solids.	<i>KLB BK IV Pgs 113-118</i>	
	2	Length between two points in three dimensions.	Determine length between two points in three dimensions.	Supervised practice, Problem solving.	Models of solids.	<i>KLB BK IV Pgs 119-124</i>	
	3	Length between two points on nets of solids.	Determine length between two points on nets of solids.	Making nets of solids; Supervised practice, Problem solving.	Manilla off-cuts, scissors/ Models of solids.	<i>KLB BK IV Pg 118</i>	
	4	Angle between skew lines.	Find the angle between skew lines.	Exposition; Guided discovery; Worked examples; Written exercise	Models of solids.	<i>KLB BK IV Pgs 142-8</i>	
	5	LONGITUDES AND LATITUDES Great and small circles	Identify great and small circles from on a globe.	Probing questions; Oral exercise.	Globe, atlas.	<i>KLB BK IV Pgs 125-7</i>	
	6	Difference in longitudes and latitudes.	Find the difference in longitudes and latitudes.	Probing questions; Oral exercise.	Wire globe.	<i>KLB BK IV Pgs 128-9, 131-141</i>	
	7	Distance along a great circle. (in nm)	Calculate the distance along a great circle. (in nm)	Exposition; Guided discovery; Worked examples; Written exercise	Wire globe, calculator.	<i>KLB BK IV Pgs 130-3, 131-141</i>	

2	1	Distance along a great circle. (in km)	Calculate the distance along a great circle. (in nm)	Exposition; Guided discovery; Worked examples; Written exercise	Wire globe, calculator.	<i>KLB BK IV Pgs 130-3, 131-141</i>	
	2	Distance along a small circle. (in nm)	Calculate the distance along a great circle. (in nm)	Exposition; Guided discovery; Worked examples; Written exercise	Wire globe, calculator.	<i>KLB BK IV Pgs 130-3, 131-141</i>	
	3	Distance along a small circle. (in km)	Calculate the distance along a great circle. (in nm)	Review previous exercise; Worked examples; Written exercise	Wire globe, calculator.	<i>KLB BK IV Pgs 133-7</i>	
	4	Shortest distance between two points on the earth's surface.	Determine the shortest distance between two points on the earth's surface.	Review previous exercise; Worked examples; Written exercise	Wire globe, calculator.	<i>KLB BK IV Pgs 137-9</i>	
	5	Longitudes and time.	Relate longitudes with local time.	Probing questions; Worked examples; Written exercise.	Wire globe, calculator.	<i>KLB BK IV Pgs 141-2</i>	
	6	Speed (in km/h)	Calculate speed given distance and time.	Probing questions; Worked examples; Written exercise.	Wire globe, calculator.	<i>KLB BK IV Pgs 142</i>	
	7	Speed (in knots)	Calculate speed given distance in nm and time.	Review previous exercise; Probing questions; Worked examples; Written exercise.	Wire globe, calculator.	<i>KLB BK IV Pgs 142</i>	
3	1	LINEAR PROGRAMMING Forming inequalities.	Form inequalities from given situations.	Q/A to review inequalities; Worked examples; Written exercise.	Graph papers.	<i>KLB BK 1V Pgs 150-1</i>	

	2	Forming inequalities.	Form inequalities from given situations.	Review previous exercise. Problem solving.	Graph papers.	<i>KLB BK IV Pgs 150-1</i>	
	3	Solutions of linear inequalities.	Solve linear inequalities.	Probing questions; Worked examples; Written exercise.	Graph papers.	<i>KLB BK IV Pgs 151-2</i>	
	4	Graphs of linear inequalities.	Represent situations graphically with inequalities.	Worked examples; Supervised practice; Written exercise.	Graph papers.	<i>KLB BK IV Pgs 188-90</i>	
	5	Graphs of linear inequalities. (contd)	Represent situations graphically with inequalities.	Exercise review; Supervised practice; Written exercise.	Graph papers.	<i>KLB BK IV Pgs 188-90</i>	
	6	Objective function.	Formulate the objective function.	Probing questions; Oral exercise.	Graph papers.	<i>KLB BK IV Pgs 191-4</i>	
	7	Optimization.	Obtain the optimum solution to inequalities.	Exposition; Guided discovery. Written exercise.	Graph papers.	<i>KLB BK IV Pgs 194-7</i>	
4	1	Further Optimization.	Obtain the optimum solution to inequalities.	Guided discovery. Written exercise.	Graph papers.	<i>KLB BK IV Pgs 197-201</i>	
	2	DIFFERENTI-- ATION Average rate of change.	Define average rate of change. Determine average rate of change.	Filling in a table of values for a curve; Plotting the curve; Finding average rate of change. Written exercise.	Graph papers, calculators.	<i>KLB BK IV Pgs 162-3</i>	
	3	Instantaneous rate of change.	Define instantaneous rate of change. Determine instantaneous rate of change.	Drawing a tangent to a curve; Supervised working; Written exercise.		<i>KLB BK IV Pg 163</i>	

	4	Gradient of a curve at a point.	Find gradient of a curve at a point.	Q/A to review gradient of a line; Exposition of gradient of a curve; Worked examples.		<i>KLB BK IV Pgs 163-4</i>	
	5	Gradient of a curve. (first principles)	Determine gradient of a curve. (first principles)	Exposition; Probing questions.		<i>KLB BK IV Pgs 164-6</i>	
	6	Derivative of a function. (first principles)	Obtain derivative of a function. (first principles)	Exposition; Probing questions.		<i>KLB BK IV Pgs 167-9</i>	
	7	Meaning of differentiation.	Recall the process of differentiation.	Exposition; Worked examples; Supervised practice; Written exercise.		<i>KLB BK IV Pgs 166-7</i>	
5	1	Derivative of a polynomial.	Differentiate a polynomial.	Exposition; Worked examples; Supervised practice; Written exercise.		<i>KLB BK IV Pgs 170-2</i>	
	2	Derivative of a polynomial with a denominator.	Differentiate a polynomial having a denominator.	Exposition; Worked examples; Supervised practice; Written exercise.		<i>KLB BK IV Pgs 170-2</i>	
	3	Derivative of a quadratic function.	Differentiate a quadratic function.	Exposition; Worked examples; Supervised practice; Written exercise.		<i>KLB BK IV Pgs 170-2</i>	
	4	Obtaining gradient from gradient function.	Obtain gradient from gradient function.	Worked examples; Supervised practice; Written exercise.		<i>KLB BK IV Pgs 170-2</i>	
	5	Equation of a tangent to a curve at a point.	Find equation of a tangent to a curve at a point.	Q/A review gradient function; Worked examples; Written exercise.		<i>KLB BK IV Pgs 173-4</i>	

	6	Equation of a normal to a curve at a point.	Find equation of a normal to a curve at a point.	Q/A review gradient function and gradients of perpendicular lines; Worked examples; Supervised practice; Written exercise.		<i>KLB BK IV Pgs 173-4</i>	
	7	Stationary point ((minimum)	Determine minimum point of a curve.	Filling in a table of gradients at various points; Probing questions; Discussion.	Graph books.	<i>KLB BK IV Pgs 174-5</i>	
6	1	Stationary point ((maximum)	Determine maximum point of a curve.	Filling in a table of gradients at various points; Probing questions; Discussion.	Graph books.	<i>KLB BK IV Pgs 175-6</i>	
	2	Stationary point (point of inflexion +ve to +ve)	Determine a point of inflexion on a curve.	Filling in a table of gradients at various points; Probing questions; Discussion.	Graph books.	<i>KLB BK IV Pgs 176-7</i>	
	3	Stationary point (point of inflexion -ve to -ve)	Determine a point of inflexion on a curve.	Filling in a table of gradients at various points; Probing questions; Discussion.	Graph books.	<i>KLB BK IV Pgs 176-7</i>	
	4	Features of a curve.	Identify points on a curve. Identify stationary points of a curve.	Probing questions; Oral exercise.	Graph books.	<i>KLB BK IV Pgs 180-1</i>	
	5	Curve sketching	Sketch curves.	Supervised practice; Written exercise.	Graph books.	<i>KLB BK IV Pgs 180-2</i>	

	6	Displacement time graphs.	Sketch and interpret displacement time graphs.	Q/A to review relation between displacement and velocity; Supervised practice; Discussion.		<i>KLB BK IV Pgs 182-3</i>	
	7	Velocity from displacement function.	Determine velocity from a displacement function.	Worked examples; Written exercise.		<i>KLB BK IV Pgs 182-3</i>	
7	1	Velocity time graphs.	Sketch and interpret velocity time graphs.	Q/A to review relation between velocity and acceleration; Supervised practice; Discussion.		<i>KLB BK IV Pgs 184-6</i>	
	2	Acceleration from velocity function.	Determine velocity from a displacement function.	Worked examples; Written exercise.		<i>KLB BK IV Pgs 184-6</i>	
	3	Acceleration from displacement function.	Determine acceleration from a displacement function.	Probing questions; Worked examples; Written exercise.		<i>KLB BK IV Pgs 184-6</i>	
	4	Maxima and minima.	Apply differentiation to find maxima and minima.	Exposition; Worked examples; Written exercise.		<i>KLB BK IV Pgs 186-9</i>	
	5	Maxima and minima (contd)	Apply differentiation to find maxima and minima.	Exercise review; Problem solving.		<i>KLB BK IV Pgs 186-9</i>	
	6	INTEGRATION Reverse the process of differentiation.	Reverse the process of differentiation.	Probing questions; Worked examples; Written exercise.		<i>KLB BK IV Pgs 207-9</i>	
	7	Finding y given gradient function.	Find y given gradient function.	Probing questions; Worked examples; Written exercise.		<i>KLB BK IV Pgs 209-12</i>	
	1	Indefinite integral.	Obtain an indefinite integral.	Exposition; Worked examples; Written exercise.		<i>KLB BK IV Pgs 212-6</i>	

8	1	Definite integral.	Obtain a definite integral.	Exposition; Worked examples; Written exercise.		<i>KLB BK IV Pgs 212-6</i>	
	2	Area bounded by a curve above x-axis.	Determine area bounded by a curve and x-axis.	Exposition; Worked examples; Written exercise.		<i>KLB BK IV Pgs 217-8</i>	
	3	Area bounded by a curve below x-axis.	Determine area bounded by a curve and x-axis.	Exposition; Worked examples; Written exercise.		<i>KLB BK IV Pgs 218-9</i>	
	4	Area bounded by a curve and a line.	Determine area bounded by a curve and a straight line.	Exposition; Worked examples; Written exercise.		<i>KLB BK IV Pg 220</i>	
	5	Displacement from velocity function.	Obtain displacement from a velocity function.	Probing questions; Worked examples; Written exercise.		<i>KLB BK IV Pgs 223-4</i>	
	6	Velocity from acceleration function.	Obtain velocity from a acceleration function.	Probing questions; Worked examples; Written exercise.		<i>KLB BK IV Pgs 223-4</i>	
	7	Exercise on kinematics.	Apply integration and differentiation in kinematics.	Exercises review; Problem solving.		<i>KLB BK IV Pgs 225-231</i>	
9	1	AREA APPROXIMATION Trapezium rule.	Derive the trapezium rule.	Divide area under a graph into several trapezia; Guided derivation of the trapezium rule.	Copies of area under a curve.	<i>KLB BK IV Pgs 196-7</i>	
	2	Application of trapezium rule.	Apply trapezium rule in problem solving.	Worked examples; Written exercise.		<i>KLB BK IV Pgs 197-201</i>	

	3	Application of trapezium rule.	Apply trapezium rule in problem solving.	Written exercise review. Problem solving.		<i>KL B BK IV Pgs 197-201</i>	
	4	The mid-ordinate rule.	Derive the mid-ordinate rule.	Divide area under a graph into several strips; Guided derivation of the trapezium rule.		<i>KL B BK IV Pgs 202-3</i>	
	5	Application of mid-ordinate rule.	Apply mid-ordinate rule.in problem solving.	Worked examples; Written exercise.		<i>KL B BK IV Pgs 203-6</i>	
	6-7	Application of mid-ordinate rule.	Apply mid-ordinate rule in problem solving.	Review exercises; Problem solving.		<i>KL B BK IV Pgs 203-6</i>	
10-13		<i>MOCK K.C.S.E EXAM</i>					