

GRADE 12 MATHEMATICS WORK FOR SEPTEMBER EXAM 2010 – PAPER 2

For detail of learning outcomes in column 1, see the 4th page (Answer Series Grade 11 & 12: The Curriculum in the Exam)

150 MARKS - 3 hrs

<p>Trigonometry 11.3.5, 11.3.6, 12.3.5 & 12.3.6</p>	<ul style="list-style-type: none"> * All basic trig – definitions and quadrant work * Negative Angles * Special Angles * Identities * Reduction formula * Solution of equations (interval and general) * Area, Sine and Cosine Rules including 2 and 3 D problems * Sin, Cos and Tan graphs including change of period, change of amplitude, vertical and horizontal shifts. * Derive and use compound and double angle identities * Identities, equations, solution of triangles using compound/ double angle formulae applications * Compound and double angle formulae – derivations and applications to all other trigonometry * Rotation of a point around the origin through a point.
<p>Transformations 11.3.4 & 12.3.4</p>	<ul style="list-style-type: none"> * Translations, Reflections and rotations of a point /polygon * Enlargement through the origin by a constant factor k * Using compound angle identities to rotate a point about the origin through a given angle
<p>Co-ordinate geometry 11.3.3, 12.3.3</p>	<ul style="list-style-type: none"> * Distance, Midpoint and Gradient formula applications * Equation of line through given points * Equation of line given 1 point and parallel/perpendicular line * Inclination of a line * Co-linear points * Equation of circle with origin as centre/ with origin not centre * Equations of tangents to above
<p>Statistics and Probability 11.4.1, 11.4.2, 11.4.3, 11.4.4</p>	<ul style="list-style-type: none"> * Measures of central tendency – five point summary: maximum, minimum and quartiles * box and whisker diagrams * ogives * variance and standard deviation and representing results graphically using histograms and frequency polygons. * Scatter plots and suggest whether a linear, quadratic or exponential function would best fit the data.