Westcliff High School
for Boys

LOWER SCHOOL GRADE DESCRIPTORS
MATHEMATICS

YEAR 7	**4**	Pupils should be able to recall and use correct mathematical notation, terminology and definitions required to solve problems and perform procedures relating to skills relevant to the Grade 4 student descriptors. This includes understanding and using place value, calculate the area and perimeter of 2D shapes and composite rectilinear shapes, calculate the mean average, express missing number problems algebraically and use simple formulae. Pupils should be able to regularly solve problems by translating simple mathematical and non-mathematical problems into mathematical processes, although their method may be less than optimal and explain their reasoning and methods verbally.
	5	Pupils should be able to recall and use correct mathematical notation, terminology and definitions required to solve problems and perform procedures, including some multi-step procedures relevant to the Grade 5 student descriptors. This includes converting between fractions, decimals and percentages, write, use and simplify ratios, expand and factorise single brackets, solve linear equations and complete a table of values to plot a straight line graph. Pupils should also be able to interpret and communicate mathematical information and results, deduce and reason to obtain solutions to a wide variety of problems and explain and evaluate their methods and solutions within a written context.
YEAR 8	**6**	Pupils should recall and use correct mathematical notation, terminology, formulae and definitions required to solve problems and perform procedures, including applying techniques to simple but non-standard multi-step procedures relevant to the Grade 6 student descriptors. This includes (reverse) percentage changes, using standard form, understand and use Pythagoras' Theorem, calculate the circumference and area of a circle and determine the equation of a straight line graph. Pupils should also be able to interpret and communicate mathematical information and results, generate a mathematical solution to problems by translating them to mathematical processes, deduce and reason to obtain solutions to a wide variety of problems and explain and evaluate their methods and solutions within the context of the given problem.
YEAR 9	**7**	Pupils should effectively recall and use correct mathematical notation, terminology, formulae and definitions required to solve problems and perform single-step procedures, including applying techniques to unseen non-standard multi-step procedures relevant to the Grade 7 student descriptors. This includes expanding double brackets, calculations involving trigonometric ratios, change the subject of a formula, solve linear simultaneous equations, manipulate surds and sketch quadratic, cubic and reciprocal graphs. Pupils should also effectively interpret and communicate mathematical information and results, generate a mathematical solution to problems by translating them to mathematical processes and interpret the results within the context of the problem, deduce and create a chain of reasoning to obtain solutions to a wide variety of problems and explain and evaluate their methods and solutions within the context of the given problem.
	EP	Pupils should accurately recall and use correct mathematical notation, terminology, formulae and definitions required to solve problems and perform single-step procedures, including applying techniques to unseen non-standard multi-step procedures relevant to the Grade 7 student descriptors. They must accurately interpret and communicate mathematical information and results and generate a mathematical solution to problems by translating them to mathematical processes and interpret the results within the context of the problem. Pupils should also be able to construct a logical chain of reasoning to obtain solutions to a wide variety of problems, explain and evaluate their methods and solutions within the context of the given problem and assess the validity of a given solution by identifying and explaining errors or misconceptions.