ORANGE HIGH SCHOOL

ASSESSMENT TASK NOTIFICATION

Subject	Year 9 5.3 Mathematics
Topic	End of Course Examination (In class during double period)
Class Teacher	Mr Harrison, Mr Smith
Head Teacher	Ms Stevenson
Year	9MA1, 9MA2
Date Given	Week 4, Term 4, 5 November, 2020
Date Due	Week 6, Term 4, 19 November, 2020
Weighting	45%

Assessment Outline

In Class Examination – 2 periods (90 minutes)

Semester 1 Content:

- **Financial Mathematics** - Rounding decimals, Converting decimals to fractions to percentages, Adding, subtracting, multiplying and dividing fractions, Writing a quantity as a percentage, Finding a percentage of a quantity, Finding the original amount (unitary method), Percentage increase, decrease and change, Percentage profit/loss, Wage, Salary, Overtime, Leave loading, Piecework, Commission, Tax, Simple Interest, Compound Interest

- **Expressions, Equations & Inequalities** - Language of algebra, converting word problems to expressions, Adding and subtracting like terms, Multiplying and dividing terms, Algebraic fractions 4 operations, Expanding brackets, Solving equations including simple 1, 2 and 3 step as well as pronumerals of both sides, brackets and fractions, Quadratic equations, Inequalities – graphing and solving, Simultaneous equations substitution and elimination methods

- **Properties of Geometrical Figures** - Angles – acute, obtuse, right, straight, reflex, revolution, vertically opposite, complementary, supplementary, Triangle angle sum and how we classify them – equilateral, isosceles, right angled, acute, obtuse, Exterior angle of a triangle, Parallel lines – alternate, corresponding and co-interior, Convex and non-convex polygons, Quadrilaterals – angle sum and basic properties of each shape, Angle sum of polygons, Exterior angle of a polygon, Congruent shapes – proving congruence and finding unknown sides and angles, Similar figures – scale factor, proving similarity and finding unknown sides and angles

- **Indices & Surds** - Index Notation, Factor trees, Index laws – multiplying, dividing, power of a power, zero power, negative indices, fractional indices, Scientific notation, Significant figures, Simple operations with surds

- **Trigonometry** - Pythagoras' Theorem hypotenuse and short side, Trigonometric ratios SOH CAH TOA, Finding unknown sides and angles using trigonometric ratios, Angles of elevation and depression, Three digit bearings

Semester 2 Content:

- **Length, Surface Area & Volume** – Limits of accuracy, Measurement of digital information, Conversion between units of length, Perimeter, Circumference of a circle, Perimeter of a sector, Perimeter of Composite shapes, Converting between units of area and perimeter, Area of a circle, Area of composite shapes, Surface area of prisms, Surface area of cylinders, Units of volume and capacity and volume of prisms, Volume of cylinders

- **Linear Relationships** – Plotting points on a number plane, Using tables of values, Determine midpoint of an interval, Determine the gradient of a line, Determine the distance between two points, Graphing horizontal and vertical lines, Determining the x and y intercept by substitution, Determine gradient and y intercept from graphs, Substitute points into equation to decide if point lies on the line, Graph lines in the form $y = mx + b$, Graphing parallel and perpendicular lines, Find equation of a line passing through a

point, Direct variation, Modelling linear relationships
- **Quadratic Expressions** – Expanding binomial products, Expanding Perfect Squares, Forming a Difference between to squares, Factorisation algebraic expressions, Factorising by grouping, Factorising the difference of two squares, Factorising monic quadratic trinomials

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Non-completion of Task:
If you know you are going to be away on the day that the task is due, you must make alternative arrangements with your teacher beforehand. If you are suddenly away on the day that the task is due, you must contact your teacher or Head Teacher on your return to school. Documentation will be required in both classes.

Plagiarism:
Plagiarism, the using of the work of others without acknowledgement will incur serious penalties and may result in zero award. Any cheating will also incur penalties.

Failure to follow the above procedures may result in a zero award.
The policies and procedures that are outlined on the ROSA booklet will be followed regarding the non-completion of assessment tasks.

Outcomes Assessed

MA5.1-4NA solves financial problems involving earning, spending and investing money

MA5.2-4NA solves financial problems involving compound interest

MA5.3-5NA selects and applies appropriate algebraic techniques to operate with algebraic expressions

MA5.3-7NA solves complex linear, quadratic, simple cubic and simultaneous equations, and rearranges literal equations

MA5.3-3WM uses deductive reasoning in presenting arguments and formal proofs

MA5.3-16MG proves triangles are similar, and uses formal geometric reasoning to establish properties of triangles and quadrilaterals

MA5.3-6NA performs operations with surds and indices

MA5.3-15MG applies Pythagoras' theorem, trigonometric relationships, the sine rule, the cosine rule and the area rule to solve problems, including problems involving three dimensions

MA4-11NA creates and displays number patterns; graphs and analyses linear relationships

MA5.3NA uses formulas to find midpoint, gradient and distance on the Cartesian plane, and applies standard forms of the equation of a straight line

MA5.2-6NA simplifies algebraic fractions, and expands and factorises quadratic expressions