CONTENTS OF WORK FOR GRADE 9 NOVEMBER 2018 - PAPER 2
TIME: 2HRS   MARKS:100   15 NOVEMBER

- No tablet required.
- Calculator required.

1. EUCLIDEAN GEOMETRY

1.1   Classification of angles and triangles.
1.2   Lines, angles, parallel lines, triangles (theorems)
1.3   Proving lines parallel.
1.4   Finding the size of missing angles with reasons.
1.5   Proving that sides are equal.
1.6   Working with x and making equations to solve for x.

2. THEOREM OF PYTHAGORAS

2.1   Using the theorem to finding the length of any side in a rt. – angled triangle.
2.2   The converse of Pythagoras.
2.3   Using Pythagoras and its converse to solve practical application problems.

3. CONGRUENCY AND SIMILARITY

3.1   Definitions of congruency and similar
3.2   Four cases of congruency.
3.3   Two cases of similarity.
3.3   Proving that two triangles are congruent or similar.
3.4   Using congruency to find remaining parts.
3.3   Using congruency and similarity to solve riders (geometry problems).

4. CONSTRUCTIONS

4.1   Bisecting angles
4.2   Angles of $30°$; $45°$; $60°$ and $90°$ and combinations.
4.3   Drawing a perpendicular.

5. QUADRILATERALS

5.1   Definitions and properties of the different types of quads.
5.2   Using these properties to solve geometry problems.

6. MEASUREMENT

6.1   2D (Perimeter, Circumference and Area) – formulae.
6.2   3D (Volume and Total Surface Area) – formulae.
6.3   Problem solving using the formulae.

7. TRANSFORMATION GEOMETRY

7.1   Translations.
7.2   Reflections.
7.3   Rotations.

8. DATA HANDLING

8.1   Collect, organise and summarise data (ranking, stem and leaf, frequency tables)
8.2   Represent data (Bar graph, histogram, pie chart, broken line graph and scatter plots).
8.3   Interpret and analyse data - Measures of Central Tendency: Mean, Median and Mode, Range and Outliers.

9. PROBABILITY

9.1   Theoretical probability
9.2   Frequency and Relative Frequency (Experimental probability)
9.3   Probability rule.
9.4   Finding probabilities of various events.
9.5   Tree Diagrams.