Gulf English School Term 1 Year 8 Mathematics

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| TOPICS: Ratio, Polygons, Area of Triangles & Parallelograms |

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| Themes: Understanding ratio and proportion; displaying knowledge of regular/irregular polygons; Applying formulae for area of triangles 7 parallelograms | Level: Year 8 |
| Objectives: To understand and use; methods for simplifying ratio; dividing in a given ratio; methods for creating proportions: To identify and classify polygons as regular/irregular; To apply knowledge of angle sum of a polygon to calculate interior/exterior angles; To create and solve equations involving unknown angles in polygons; To create/design patterns using tessellating polygons: To apply formulae for area of triangles & parallelograms; To explain how to calculate a missing length given an area and one length; To assess methods of calculating area of compound shapes. | |

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| Focussing Questions | Key Words | |
| **1-2 Ratio**   * Key resources: STP Year 8 Chapter 5 Ex 5a – f * What are the rules of working with ratio? * What is ratio used for? * What effect does changing all units in a ratio have?   + Assessment: Cumulative quiz   **3-4. Polygons:**   * Key resources: STP Book Year 8 Chapter 6 Ex 6a - h * Explain the difference between a regular & irregular polygon? * How can we show equal sides/angles on a diagram? * What do exterior angles sum to? Can you explain why? * How can we predict which polygons will tessellate? * Always / Sometimes / Never: exterior angles of a polygon add to 3600?   + Assessment: Cumulative quiz   **5-6. Area: Triangles & parallelograms**   * Key resource: STP Book Year 8 Chapter 7 Ex 7a - f * Explain the area of a triangle formula. * How do we illustrate unknown quantities? * If you calculate a missing length, how can you demonstrate your answer is correct? * Design a question involving a compound shape. Assess the different methods available to calculate the area of your compound shape.   + Assessment: Cumulative quiz   Assessment: Cumulative test | Ratio  Simplest form  Proportion  Multiplier  Equivalent fractions  Regular polygon  Irregular polygon  Angle sum  Interior angle  Exterior angle  Tessellations  Formula  Formulae  Variable  Unknown  Inverse  Compound shape | Explaining words  To convert to simplest form…  You must only multiply or divide ratio because….  Therefore...  The definition of a regular polygon is….  The properties of the interior/exterior angles of a polygon are….  We can form and solve an equation if…. |

**TEXT BOOK: STP MATHEMATICS YEAR 8**