Year 11 Standard Mathematics

**Assessment Task 2** 2023



Name…………………………………. Teacher:……………………………………

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| **TOPIC**: Applications of Perimeter, Area & Volume | | | **MARKS: 47** | |
| **SUBMISSION REQUIREMENTS:**  Hand in by Monday 29th May, 2023 (Week 6) | | | **WEIGHTING:** 30% | |
| **OUTCOMES TO BE ASSESSED:**  **MS11-3 solves** problems involving quantity measurement, including accuracy and the choice of relevant units  **MS11-4 performs** calculations in relation to two-dimensional and three-dimensional figures  **MS11-9 uses** appropriate technology to investigate, organise and interpret information in a range of contexts  **MS11-10 justifies** a response to a given problem using appropriate mathematical terminology and/or calculations | | | | |
| **DIRECTIONAL VERBS:**  **Solve**: find the value.  **Calculate**: ascertain/determine from given facts, figures or information.  **Investigate**: plan, inquire into and draw conclusions about  **Organise**: arrange in order  **Interpret**: draw meaning from  **Justify** - Support an argument or conclusion | | | | |
| **TASK DESCRIPTION:**  In this task, you will explore practical application of Perimeter, Area and Volume by completing the three sections detailed below.  This assessment is a TAKE-HOME task consisting of 3 sections as below:   * Section 1 (Part A and B) – Perimeter, Surface Area and Volume totalling 24 marks of the total marks. * Section 2 - Surface Area, Volume of Prisms, Pyramids and Spheres applications totalling 13 marks of the total marks. * Section 3 - Trapezoidal rule applications totalling 10 marks of the total marks.   *Your work will be marked on your ability to answer the questions correctly showing mathematical working, reasoning and/or calculations.* | | | | |
| **Section 1:**  Part A - You’re the Designer Now  Part B – Familiar Shapes Around Me | /6  /18 | |
| **Section 2:** Covered in Chocolates | /13 | |
| **Section 3:** Designing a Rock-Climbing Wall | /10 | |
| **Total** | **/ 47** | |

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| **ASSESSMENT CRITERIA:**  **Task Instructions:**   * Ensure **ALL** working out is clearly shown and instructions for setting out diagrams with labelling are followed. * Make sure to submit your work in a with your name and teacher clearly written and with the marking criteria.   **ALL WORK MUST BE SUBMITTED TO YOUR CLASS TEACHER BY Monday 29th MAY 2023**  You will be marked on your ability to:   * Solve practical problems requiring the calculation of perimeters * Calculate the surface area of solids including but not limited to prisms, cylinders, spheres and composite solids * Calculate the volume of solids including but not limited to prisms, cylinders, spheres, pyramids and composite solids * Convert between units of volume and capacity * Apply the Trapezoidal Rule with four applications * Solve problems involving perimeter, area, surface area, volumes, and capacity in a variety of contexts |