Assessment Schedule for Mathematics and Statistics AS 91030 - Measurement **Name: _____**

Evidence/Judgments for achievement	Evidence/Judgments for achievement with merit	Evidence/Judgments for achievement with excellence
Apply measurement in solving problems. Students use a range of (3) appropriate methods when solving problems. This demonstrates knowledge of measurement concepts and terms. Solutions typically require one or two steps	Apply measurement, using relational thinking, in solving problems. Students carry out a logical sequence of steps to create and form a model and either relate their solutions to the context or communicate their thinking using mathematical statements	Apply measurement, using extended abstract thinking, in solving problems. Students devise a strategy to investigate or solve a problem and use correct mathematical statements or communicating mathematical insight.
Student selects and uses at least **three different measurement methods** in an attempt to solve the problem. *Examples of methods:* ▢ apply the relationships between **units** in the metric system, including the units for measuring different attributes and derived measures *(Measures include density, speed and other rates such as unit cost or fuel consumption.)* ...this is including the conversion of area and volume units, especially cm^3-ml and similar ▢ Use formula to find **perimeters** (can be within calculations of SA) of polygons & prisms ▢ Use formula to find **areas** (both area of 2D shapes, composite and SA of 3D shapes) of (non-trivial) polygons & prisms ▢ Use formula to find **volumes** of (non-trivial) 3D solids & prisms A student may not manage to create two solids which fit the criteria (due to having made mistakes in decision making of dimensions) but **can still be awarded Achieved** if they have consistently carried out **3 of the above skills correctly**. Whilst all calculations must be relevant to the problem being solved a guess and check method is acceptable.	Students will: ▢ Give dimensions for 2 solids which meet the criteria, potentially with one or two minor errors (or omissions). ▢ make a mathematically justified (requires calculating costs and comparing them) decision as to which of their designs is the one they recommend. ▢ use correct mathematical statements and try to communicate what they are calculating at each step. Students' answers will vary depending on their choice of task, shape, contextual considerations etc...	Students will: ▢ complete the problem comprehensively with more than one option discussed; (they may make a minor error but not conceptual errors) AND ▢ consider and investigate a range of contextual *mathematical* considerations and how these affected the final answer. AND ▢ make a mathematically justified (requires calculating costs and comparing them) decision as to which of their designs is the one they recommend Their answer *may* include a mathematical investigation into a number of the points below or other comments of similar complexity: ○ Wastage of materials ○ Profits available ○ Tessellations and ease of stacking/transporting ○ Contextual considerations of non-mathematical things that could affect the decision ONLY IF the effect of these changes on the answer are researched and calculated (dimensions, lengths, materials, etc) Students must use correct mathematical statements and clearly communicate what they are calculating at each step.

Final grades will be decided using professional judgement based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.