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| Year: **8/9** KLA: **Mathematics** Assessment name: **How Do You Measure Up?** | Student  |
| Purpose: *To gather evidence of the students’ ability to reflect on the contribution of trigonometry and Pythagoras’ theorem in history and today, identify relevant information required when solving problems, and use the concepts to take indirect measurements.*  |
| Knowledge & Understanding | Knowledge & Understanding | Thinking & Reasoning | Reflecting | Communicating |  |
| *Indirectly measures lengths and angles using trigonometry and Pythagoras’ theorem concepts.*  | *Identifies sources of error and makes judgements on the compounding effects of these errors* | *Analyses the situation to identify the information that is important to be able to find an accurate or reasonable solution to the problem.* | *Reflects on the development and use of trigonometry and Pythagoras through history and its relevance in today’s society.* | *Communicates thinking and justifies reasoning, using appropriate mathematical language, representations and technologies.* |  |
|  | * Comprehensively and insightfully identifies possible sources of error, methods for minimising errors, and compounding effects of errors.
 | * Comprehensively and independently gathers relevant information and presents through clear and accurate diagrams.
 | * Insightful and meaningful reflection on the development and uses and impact of the concepts though history and today.
 | * Clear and consistent communication and justification of thinking and reasoning using mathematical language, representations and technologies. Clear referencing shown.
 | A |
|  * Consistently and accurately measures lengths and angles indirectly using appropriate trigonometric or Pythagorean concepts. .
 |   |  |  |  |
|  |  |  |  |  | B |
|  | * Identifies relevant sources of error, some methods for minimising errors, with reference to compounding effects given.
 | * Independently gathers relevant information and presents through accurately labelled diagrams.
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| * Accurately measures lengths and angles using appropriate concepts.
 |  |  | * Relevant reflection on the development and uses of the concepts through history and today.
 | * Communication and justification of thinking and reasoning using appropriate mathematical language, representations and technologies.
 | C |
| * Measures lengths and angles, selecting inappropriate concepts ie cos instead of sin.
 |  | * Gathers and presents all relevant information and some irrelevant information through labelled diagrams.
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|  | * Identifies relevant sources of error.
 |  |  |  | D |
|  | * Recognises that measurements could be made more accurate.
 | * A sketch of the problem is presented with some relevant information.
 | * Relevant dates and names given to describe the development in history. Superficial reflection on uses.
 | * Everyday language is predominately used.
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| * Measurements involve guesses, inferences or approximations rather than calculations
 |  |  |  |  | E |
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