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Support Stage 5 CORE & PATHWAY Mathematics

Assessment Task 1 – 2024

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| **TOPIC**: Algebraic Techniques A and Geometrical Representations | **MARKS:** 40 |
| **SUBMISSION REQUIREMENTS:** Term 1 – Week 9 – WEDNESDAY 27th March 2024 |
| **OUTCOMES TO BE ASSESSED:****MAO-WM-01 – develops** understanding and fluency in mathematics through **exploring** and **connecting** mathematical concepts, **choosing** and **applying** mathematical techniques to **solve** problems, and **communicating** their thinking and reasoning coherently and clearly. **MA5-ALG-C-01 – simplifies** algebraic fractions with numerical denominators and **expands** algebraic expressions**MA5-GEO-C-01 – identifies** and **applies** the properties of similar figures and scale drawings to **solve** problems |
| **DIRECTIONAL VERBS:****Apply:** Uses, utilise, employ in a particular situation.**Communicates:** to present information from given facts or figures. **Connects:** Associate or relate information. **Choose:** Pick out something as being the most appropriate of the alternatives given.**Develops:** Cause to grow and become more advanced or elaborate. **Expands:** Removing brackets using multiplication methods. **Explores:** Inquire into or discuss in detail. **Identifies:** Establish or indicate what something is.**Simplifies:** Reduce (an equation, fraction, etc.) to a simpler form by cancelling common factors, regrouping terms in same variable. **Solve:** Ascertain, evaluate, determine from given facts, figures or information.  |
| **TASK DESCRIPTION:**Assessment Task 1 is an in-class examination consisting of:* A combination of 14 short answer and 4multiple-choice questions on Algebraic Techniques A totalling 24 marks of the total marks
* A combination of 5 short answer and 6multiple-choice questions on Geometrical Representations totalling 16 marks of the total marks

The examination will be conducted in a **one period lesson**.* Students are allowed to use **one A4 SUMMARY SHEET.**
* Students will be given one period of class time to create the summary sheet. If you are absent on this day, it is your responsibility to seek assistance from your teacher outside of class time.
* No other notes or books can be used during the exam.
* **CALCULATORS** can be used in this examination.

Equipment required:**Ruler - Pen - Pencil – Eraser** and **CALCULATOR**Revision will be given in class.If you are absent when revision is given, it is your responsibility to seek assistance from your teacher outside of class time.Revision material is also available on CANVAS. **Students are encouraged to review the following concepts:**

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| **Algebraic Techniques A** | **Geometrical Representation** |
| * Collecting like terms (adding and subtracting algebraic expressions)
* Multiplying algebraic expressions
* Dividing algebraic expressions
* Expanding brackets (removing grouping symbols) e.g. $4(x+3)$
* Expanding brackets and simplifying
* Binomial expansion e.g. $(5-b)(3+b)$
* Adding and subtracting algebraic fractions with the same and different denominators including simplifying
* Multiplying algebraic fractions including simplifying
* Dividing algebraic fractions including simplifying
 | * Define similar figures
* Match corresponding sides and corresponding angles in similar figures
* Use scale factor to draw enlargements or reductions
* Find the scale factor
* Use scale factor to find the length of missing sides
* Use scale factor to determine if shapes are similar
* Solve practical problems involving similar figures and scale factor including scale drawings
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| **ASSESSMENT CRITERIA:**You will be marked on your ability to answer the questions correctly. Show relevant mathematical working, reasoning and/or calculations. |