**Maths (Advocate: Thiago Viana)**

**Calculate the greatest common divisor and least common multiple of a given pair of numbers.**

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| <https://github.com/SDearing/Math/blob/master/GCD%20and%20LCM%20Calculations.md> |
| In this document is a report on how to calculate the greatest common divisor and least common multiple of two given numbers. |

**Use relevant theory to sum arithmetic and geometric progressions.**

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| <https://github.com/SDearing/Math/blob/master/Arithmetic_and_Geometric_Algorithm.md> |
| In this document is a description of what arithemetic and geometric progressions are and a algorithm of how to calculate the next term in either sequence |

**Deduce the conditional probability of different events occurring within independent trials.**

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| <https://github.com/SDearing/Math/blob/master/Probability.md> |
| In this document are multiple examples of conditional probabilities and how to calculate them, under the heading conditional probability. |

**Identify the expectation of an event occurring from a discrete, random variable.**

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| <https://github.com/SDearing/Math/blob/master/Probability.md> |
| In this document I have spoken about the probability of any random integer being divisible by 5. |

**Identify simple shapes using co-ordinate geometry.**

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| TBD |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement  A link to the algorithm that we created in the TASK 4 in my sessions:   * **Algorithm** to identify simple shapes using co-ordinates   OBS: The simple shapes that we used are: square, rectangle and triangle |

**Determine shape parameters using appropriate vector methods.**

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| Please use this section to provide all appropriate, valid and checked http Links that point to your evidence; use multiple lines to separate multiple links |
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**Determine the rate of change within an algebraic function.**

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**Use integral calculus to solve practical problems involving area.**

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| TBD |
| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement  A link to your TASK 6 in my sessions:   * **Simple report,** how to use integral calculus to solve practical problems involving area. |

**Identify multiplicative inverses in modular arithmetic.**

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**Calculate probabilities within both binomially distributed and normally distributed random variables.**

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**Evaluate the coordinate system used in programming a simple output device.**

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| Please provide a short (between 3 to 8 well considered, fully proofread and reflected sentences) explanation that justifies why the evidence/links you have provided is suitable as evidence of this requirement  TBD was ill for project 1  You did this in the project 1. You used coordinates to create a shape (or image) and made this shape(or image) follow the mouse. The mouse is the input and the shape(or image) is the output element. And you had to use coordinates to implement them. All you need to do is describe this process and provide a link to your project 1. |

**Analyse maxima and minima of increasing and decreasing functions using higher order derivatives.**

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**Produce a detailed written explanation of the importance of prime numbers within the field of computing.**

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**Evaluate probability theory to an example involving hashing and load balancing.**

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**Construct the scaling of simple shapes that are described by vector coordinates.**

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**Justify, by further differentiation, that a value is a minimum.**

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