**Maths (Advocate: Thiago Viana)**

**P1 Calculate the greatest common divisor and least common multiple of a given pair of numbers.**

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| Link: <https://github.com/LukeShead/Maths#calculating-the-lowest-common-multiple-of-two-numbers>  Link: <https://github.com/LukeShead/Maths#calculating-the-greatest-common-divisor> |
| I believe this link justifies me passing this criteria as it explains how to calculate the GCD and the LCM of two numbers as well as showing examples for them. |

**P2 Use relevant theory to sum arithmetic and geometric progressions.**

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| Link: <https://github.com/LukeShead/Maths#arithmetic-and-geometric-progressions> |
| I believe this link justifies me passing this criteria as it shows my knowledge on the topic of the progression, as well as this it shows an algorithm that I created to calculate arithmetic and geometric progression. |

**P3 Deduce the conditional probability of different events occurring within independent trials.**

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| Link: <https://github.com/LukeShead/Maths/blob/master/README.md#deduce-the-conditional-probability-of-different-events-occurring-within-independent-trials> |
| I believe this link justifies me passing this criteria as it explains how to calculate the probability with a trail example of rolling two dice. |

**P4 Identify the expectation of an event occurring from a discrete, random variable.**

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| Link: <https://github.com/LukeShead/Maths/blob/master/README.md#identify-the-expectation-of-an-event-occurring-from-a-discrete-random-variable> |
| I believe this link justifies me passing this criteria as it gives information of how to identify the probability of a random variable with an equation and example which further explains how it works. |

**P5 Identify simple shapes using co-ordinate geometry.**

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| Links: <https://github.com/LukeShead/Maths/blob/master/README.md> |
| I believe this link justifies me passing this criteria as I clearly explain how co-ordinate geometry can help identify based on the pattern within the points. |

**P6 Determine shape parameters using appropriate vector methods.**

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| <https://github.com/LukeShead/Maths#vector-methods> |
| This criteria has been met as in the link, it fully explains the use of vector method in order to determine shape parameters whilst also giving examples and the equation to do so. |

**P7 Determine the rate of change within an algebraic function.**

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| <https://github.com/LukeShead/Maths#rate-of-change> |
| The rate of change within a function with algebra is described by giving examples of the process to complete, then doing some examples of my own. |

**P8 Use integral calculus to solve practical problems involving area.**

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| <https://github.com/LukeShead/Maths#integral-calculus> |
| This link shows how the calculus can solve practical problems involving area by giving examples of questions solved as well as the process of completion. |

**M1 Identify multiplicative inverses in modular arithmetic.**

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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 |
| TO DO (you can leave it blank now, we are going to address this in future sessions) |

**M2 Calculate probabilities within both binomially distributed and normally distributed random variables.**

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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 |
| TO DO (you can leave it blank now, we are going to address this in future sessions) |

**M3 Evaluate the coordinate system used in programming a simple output device.**

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| Link: <https://github.com/LukeShead/Project-01#the-implementation> |
| In this repository, I explain how I was able to make an NPC follow certain coordinates of a user’s mouse, this justifies the criteria as the project uses coordinates to run therefore is a correct system for the criteria. |

**M4 Analyse maxima and minima of increasing and decreasing functions using higher order derivatives.**

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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 |
| TO DO (you can leave it blank now, we are going to address this in future sessions) |

**D1 Produce a detailed written explanation of the importance of prime numbers within the field of computing.**

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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 |
| TO DO (you can leave it blank now, we are going to address this in future sessions) |

**D2 Evaluate probability theory to an example involving hashing and load balancing.**

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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 |
| TO DO (you can leave it blank now, we are going to address this in future sessions) |

**D3 Construct the scaling of simple shapes that are described by vector coordinates.**

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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 |
| TO DO (you can leave it blank now, we are going to address this in future sessions) |

**D4 Justify, by further differentiation, that a value is a minimum.**

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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 |
| TO DO (you can leave it blank now, we are going to address this in future sessions) |