**Maths (Advocate: Thiago Viana)**

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

|  |
| --- |
| [**https://github.com/EmperorDan/Math/blob/master/GCD-LCM-Calculation.md**](https://github.com/EmperorDan/Math/blob/master/GCD-LCM-Calculation.md) |
| I have described the processes of calculating the greatest common divisor. I have done the same for calculating the least common-multiple of a given pair. |

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

|  |
| --- |
| [**https://github.com/EmperorDan/Math/blob/master/Arithmetic-%26-Geometric-Algorithm.md**](https://github.com/EmperorDan/Math/blob/master/Arithmetic-%26-Geometric-Algorithm.md) |
| 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 |

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

|  |
| --- |
| [**https://github.com/EmperorDan/Math/blob/master/Probability.md**](https://github.com/EmperorDan/Math/blob/master/Probability.md) |
| I have described probability with die. I have worked out the probability, and described my process in doing so. |

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

|  |
| --- |
| [**https://github.com/EmperorDan/Math/blob/master/Probability-Random-Integer.md**](https://github.com/EmperorDan/Math/blob/master/Probability-Random-Integer.md) |
| I find the probability of a random integer being divisible by 5. I describe how I went about this in detail. |

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

|  |
| --- |
| [**https://github.com/EmperorDan/Math/blob/master/Simple-Shapes-Algorithm.cpp**](https://github.com/EmperorDan/Math/blob/master/Simple-Shapes-Algorithm.cpp) |
| This is an |

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

|  |
| --- |
| <https://github.com/EmperorDan/Math/blob/master/Vector.md> |
| 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 |

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

|  |
| --- |
| <https://github.com/EmperorDan/Math/blob/master/Rate%20of%20change.md> |
| 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 |

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

|  |
| --- |
| <https://github.com/EmperorDan/Math/blob/master/Integral%20Calculus.md> |
| 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 |

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

|  |
| --- |
| Pending |
| 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 |

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

|  |
| --- |
| Pending |
| 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 |

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

|  |
| --- |
| **TO DO** |
| 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 |

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

|  |
| --- |
| Pending |
| 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 |

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

|  |
| --- |
| Pending |
| 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 |

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

|  |
| --- |
| Pending |
| 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 |

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

|  |
| --- |
| Pending |
| 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 |

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

|  |
| --- |
| Pending |
| 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 |