**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/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. |

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

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| [**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 |

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

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| [**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. |

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

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| [**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. |

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

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| [**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 |

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

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| <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 |

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

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| 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 |

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

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| 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 |

**Identify multiplicative inverses in modular arithmetic.**

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| 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 |

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

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| 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 |

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

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| **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 |

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

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| 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 |

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

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| 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 |

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

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| 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 |

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

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| 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 |

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

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| 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 |