**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/kap14275819/Weekly-Tasks/blob/master/README.md#greatest-common-divisor-and-least-common-multiple> |
| In this link it will show the evidence for calculating the greatest common divisor and the least common multiple. |

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

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| <https://github.com/kap14275819/Weekly-Tasks/blob/master/Arithmetic%20and%20Geometirc> |
| In this link it will show a piece of code for the programming language C++ which sums up the arithmetic and geometric progression. |

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

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| <https://github.com/kap14275819/Weekly-Tasks/blob/master/README.md#conditional-probability> |
| In this link it will show the definition of what conditional probability is and some examples of how conditional probability works. |

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

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| <https://github.com/kap14275819/Weekly-Tasks-Maths/blob/master/README.md#expectations-of-an-event> |
| In this link it will show the expectation of an event that occurs from a discrete, random variable. |

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

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| <https://github.com/kap14275819/Weekly-Tasks/blob/master/Co-ordinate%20Geometry> |
| In this link it will show a piece of code for the programming language C++ which identifies simple shapes using co-ordinate geometry. |

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

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| <https://github.com/kap14275819/Weekly-Tasks-Maths/blob/master/README.md#vectors> |
| In this link it will show the explanation of vectors and examples of using vectors to determine shape parameters |

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

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| <https://github.com/kap14275819/Weekly-Tasks-Maths/blob/master/README.md#rate-of-change> |
| In this link it will show how to determine the rate of change within an algebraic function |

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

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| <https://github.com/kap14275819/Weekly-Tasks-Maths/blob/master/README.md#integral-calculus> |
| In this link it will show how to use integral calculus to solve practical problems which involve area. |

**Identify multiplicative inverses in modular arithmetic.**

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| To be completed |
| 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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| To be completed |
| 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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| <https://github.com/kap14275819/Traceball-Project-1/blob/master/Traceball%20final.html> |
| In the first link it will show the code for project 1 which is in HTML and in this game the use of a coordinate system is used within the programme. |

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

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| To be completed |
| 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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| To be completed |
| 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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| To be completed |
| 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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| To be completed |
| 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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| To be completed |
| 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 |