**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/HORNETJOE/Mathematics/blob/master/README.md#how-to-calculate-the-greatest-common-divisor-and-least-common-multiple-of-a-given-pair-of-numbers> |
| The link above will direct to the maths repository which contains a calculation that will calculate the greatest common divisor and least common multiple of a given pair of numbers. |

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

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| <https://github.com/HORNETJOE/Mathematics/blob/master/README.md#algorithm-to-calculate-arithmetic-and-geometric-progression> |
| the link above will direct to the maths repository which contains relevant theory to sum arithmetic and geometric progressions. |

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

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| <https://github.com/HORNETJOE/Mathematics/blob/master/README.md#deduce-the-conditional-probability-of-different-events-occurring-within-independent-trials> |
| Above is a link that will direct to information about Deduce the conditional probability of different events occurring within independent trials. |

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

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| <https://github.com/HORNETJOE/Mathematics/blob/master/README.md#the-expectation-of-an-event-occurring-from-a-discrete-random-variable> |
| The above link will direct to information about Identify the expectation of an event occurring from a discrete, random variable. |

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

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| <https://github.com/HORNETJOE/Mathematics/blob/master/README.md#identify-simple-shapes-using-co-ordinate-geometry> |
| The above link will direct to information about Identify simple shapes using co-ordinate geometry. |

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

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| To be completed |
| To be completed |

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

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| To be completed |
| To be completed |

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

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| <https://github.com/HORNETJOE/Mathematics> |
| The link above will direct to the mathematics page which contains information Use integral calculus to solve practical problems involving area. |

**Identify multiplicative inverses in modular arithmetic.**

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| To be completed |
| To be completed |

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

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| To be completed |
| To be completed |

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

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| <https://github.com/HORNETJOE/Project01> |
| To be completed |

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

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| To be completed |
| To be completed |

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

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| To be completed |
| To be completed |

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

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| To be completed |
| To be completed |

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

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| To be completed |
| To be completed |

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

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| To be completed |
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