**Maths (Advocate: Thiago Viana)**

**P1 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. |

**P2 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. |

**P3 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. |

**P4 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. |

**P5 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. |

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

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| <https://github.com/HORNETJOE/Mathematics#vectors> |
| The link above will direct to a section of the maths repo which explains how to determine shape parameters using appropriate vector methods |

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

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| <https://github.com/HORNETJOE/Mathematics/blob/master/README.md#rate-of-change-within-an-algebraic-function> |
| The link will direct to the rate of change within an algebraic function |

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

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| <https://github.com/HORNETJOE/Mathematics/blob/master/README.md#integral-calculus> |
| The link above will direct to the integral calculus section of the math repo. |

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

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| To be completed |
| To be completed |

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

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| To be completed |
| To be completed |

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

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

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

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| To be completed |
| To be completed |

**D1 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 |

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

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| To be completed |
| To be completed |

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

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| To be completed |
| To be completed |

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

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| To be completed |
| To be completed |