**Maths (Advocate: Thiago Viana)**

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

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| This link will show you where I explain the Lowest common multiple and the Greatest common divisor and it contains an example of how to carry out each one too.  <https://github.com/George-Haughton/Maths-mapping-document#lowest-common-multiple> |

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

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| This link will take you to my Github where I explained what Arithmetic and Geometric Progression are with an Algorithm that will calculate them both.  <https://github.com/George-Haughton/Maths-mapping-document#arithmetic-and-geometric-progression> |

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

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| This link will show you a complete definition of what Conditional probability is, and will also take you through how to complete a few examples of Conditional probability.  <https://github.com/George-Haughton/Maths-mapping-document#conditional-probability> |

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

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| This link will take you to a Repo on my Github that will contain an example of an expectation of an event occurring from a discrete, random variable, that being ‘what is the probability of a random integer being divisible by 5?’  <https://github.com/George-Haughton/Maths-mapping-document#what-is-the-probability-of-a-random-integer-being-divisible-by-5> |

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

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| This link will take you to a repo containing definitions and examples of formulas and shapes that are all apart of Co-ordinate geometry.  <https://github.com/George-Haughton/Maths-mapping-document#co-ordinate-geometry> |

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

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| This link will show you the algorithm I made that will create shapes using appropriate vector methods it will also go through and explain what a vector is.  <https://github.com/George-Haughton/Maths-mapping-document#vector> |

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

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| This link will explain in detail how to work out the Rate of change and what Rate of change actually is; additionally, it shows examples of me working out the Rate of change for a given problem.  <https://github.com/George-Haughton/Maths-mapping-document/blob/master/README.md#rate-of-change> |

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

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| This link will provide in detail explaining what Integral calculus is, how to work it out, formulas you use and it also contains examples of how to work out Integral calculus.  <https://github.com/George-Haughton/Maths-mapping-document/blob/master/README.md#rate-of-change> |

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

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

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

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

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

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

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

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

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