|  |
| --- |
| Stage 1 MathematicsAlignment with Australian Curriculum Content Descriptions |

|  |
| --- |
| **Topic 1: Functions and Graphs** |
| Subtopic 1.1: Lines and Linear Relationships | ACMMM001 |
|  | ACMMM002 |
|  | ACMMM003 |
|  | ACMMM004 |
|  | ACMMM005 |
| Subtopic 1.2: Inverse Proportion | ACMMM012 |
|  | ACMMM013 |
|  | ACMMM014 |
| Subtopic 1.3: Relations | ACMMM020 |
| Subtopic 1.4: Functions | ACMMM022 |
|  | ACMMM023 |
|  | ACMMM024 |

|  |
| --- |
| **Topic 2: Polynomials** |
| Subtopic 2.1: Quadratic Relationships | ACMMM006 |
|  | ACMMM007 |
|  | ACMMM008 |
|  | ACMMM009 |
|  | ACMMM010 |
|  | ACMMM011 |
| Subtopic 2.2: Cubic and Quartic Polynomials | ACMMM015 |
|  | ACMMM016 |
|  | ACMMM017 |
|  | ACMMM018 |
|  | ACMMM019 |

|  |
| --- |
| **Topic 3: Trigonometry** |
| Subtopic 3.1: Cosine and Sine Rules | ACMMM028 |
|  | ACMMM031 |
| Subtopic 3.2: Circular Measure and Radian Measure | ACMMM029 |
|  | ACMMM030 |
|  | ACMMM032 |
|  | ACMMM033 |
|  | ACMMM034 |
|  | ACMMM035 |
| Subtopic 3.3: Trigonometric Functions | ACMMM036 |
|  | ACMMM037 |
|  | ACMMM038 |
|  | ACMMM039 |
|  | ACMMM040 |
|  | ACMMM042 |
|  | ACMMM043 |

|  |
| --- |
| **Topic 4: Counting and Statistics** |
| Subtopic 4.1: Counting | ACMSM001 |
|  | ACMSM002 |
|  | ACMSM003 |
|  | ACMSM004*(repeated objects excluded)* |
|  | ACMMM044 |
|  | ACMMM045 |
| Subtopic 4.2: Discrete and Continuous Random Data | ACMSP278 (F-10) |
| Subtopic 4.3: Samples and Statistical Measures  |  |
| Subtopic 4.4: Normal Distributions | ACMMM169 |

|  |
| --- |
| **Topic 5: Growth and Decay** |
| Subtopic 5.1: Indices and Index Laws | ACMMM061 |
|  | ACMMM062 |
| Subtopic 5.2: Exponential Functions | ACMMM064 |
|  | ACMMM065 |
|  | ACMMM066 |
|  | ACMMM067 |
| Subtopic 5.3: Logarithmic Functions  | ACMMM151 |
|  | ACMMM152 |
|  | ACMMM155 |

|  |
| --- |
| **Topic 6: Introduction to Differential Calculus** |
| Subtopic 6.1: Rate of Change | ACMMM080 |
| Subtopic 6.2: The Concept of a Derivative | ACMMM081 |
|  | ACMMM082 |
|  | ACMMM083 |
|  | ACMMM084 |
|  | ACMMM085 |
| Subtopic 6.3: Computations of Derivatives | ACMMM086 |
|  | ACMMM087 |
|  | ACMMM088 |
| Subtopic 6.4: Properties of Derivatives | ACMMM089 |
|  | ACMMM090 |
|  | ACMMM091 |
| Subtopic 6.5: Applications of Derivatives | ACMMM092 |
|  | ACMMM093 |
|  | ACMMM094 |
|  | ACMMM095 |
|  | ACMMM096 |

|  |
| --- |
| **Topic 7: Arithmetic and Geometric Sequences and Series** |
| Subtopic 7.1: Arithmetic Sequences and Series | ACMMM068 |
|  | ACMMM069 |
|  | ACMMM070 |
|  | ACMMM071 |
| Subtopic 7.2: Geometric Sequences and Series | ACMMM072 |
|  | ACMMM073 |
|  | ACMMM074 |
|  | ACMMM075 |
|  | ACMMM076 |

|  |
| --- |
| **Topic 8: Geometry** |
| Subtopic 8.1: Circle Properties | ACMMG272 (10A) |
|  | ACMSM029 |
|  | ACMSM030 |
|  | ACMSM031 |
|  | ACMSM032 |
|  | ACMSM033 |
|  | ACMSM034 |
|  | ACMSM035 |
|  | ACMSM036 |
|  | ACMSM037 |
|  | ACMSM038 |
| Subtopic 8.2: The Nature of Proof | ACMSM024 |
|  | ACMSM025 |
|  | ACMSM028 |

|  |
| --- |
| **Topic 9: Vectors in the Plane** |
| Subtopic 9.1: Vector Operations | ACMSM010 |
|  | ACMSM011 |
|  | ACMSM012 |
|  | ACMSM013 |
|  | ACMSM021 |
| Subtopic 9.2: Component and Unit Vector Forms | ACMSM010 |
|  | ACMSM011 |
|  | ACMSM014 |
|  | ACMSM015 |
|  | ACMSM016 |
|  | ACMSM017 |
|  | ACMSM018 |
|  | ACMSM023 |
| Subtopic 9.3: Projections | ACMSM019 |
|  | ACMSM020 |
|  | ACMSM021 |
|  | ACMSM022 |
| Subtopic 9.4: Geometric Proofs using Vectors | ACMSM039 |
|  | ACMSM040 |
|  | ACMSM041 |

|  |
| --- |
| **Topic 10: Further Trigonometry** |
| Subtopic 10.1: Further Trigonometric Functions | ACMSM042 |
|  | ACMSM043 |
|  | ACMSM050 |
| Subtopic 10.2: Trigonometric Identities | ACMSM041 |
|  | ACMSM044 |
|  | ACMSM045 |
|  | ACMSM046 |
|  | ACMSM047 |
|  | ACMSM048 |
|  | ACMSM049 |

|  |
| --- |
| **Topic 11: Matrices**  |
| Subtopic 11.1: Matrix Arithmetic | ACMSM051 |
|  | ACMSM052 |
|  | ACMSM053 |
| Subtopic 11.2: Transformations in the Plane | ACMSM054 |
|  | ACMSM055 |
|  | ACMSM056 |
|  | ACMSM057 |
|  | ACMSM058 |
|  | ACMSM059 |
|  | ACMSM060 |

|  |
| --- |
| **Topic 12: Real and Complex Numbers** |
| Subtopic 12.1: The Number Line | ACMSM061 |
|  | ACMSM062 |
|  | ACMSM063 |
| Subtopic 12.2: Introduction to Mathematical Induction | ACMSM064 |
| Subtopic 12.3: Complex Numbers | ACMSM067 |
|  | ACMSM068 |
|  | ACMSM069 |
|  | ACMSM070 |
| Subtopic 12.4: The Complex (Argand) Plane | ACMSM071 |
|  | ACMSM072 |
|  | ACMSM073 |
| Subtopic 12.5: Roots of Equations | ACMSM074 |
|  | ACMSM075 |
|  | ACMSM076 |