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R

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Equations

- A.1** Solve linear equations
- A.2** Solve linear equations: word problems
- A.3** Solve absolute value equations
- A.4** Graph solutions to absolute value equations

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Inequalities

- B.1** Graph a linear inequality in one variable
- B.2** Graph a linear inequality in the coordinate plane
- B.3** Write inequalities from graphs
- B.4** Write a linear inequality: word problems
- B.5** Solve linear inequalities
- B.6** Graph solutions to linear inequalities
- B.7** Solve absolute value inequalities
- B.8** Graph solutions to absolute value inequalities
- B.9** Graph solutions to quadratic inequalities
- B.10** Solve quadratic inequalities

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Functions

- C.1** Domain and range
- C.2** Identify functions
- C.3** Evaluate functions
- C.4** Find values using function graphs
- C.5** Complete a table for a function graph
- C.6** Find the gradient of a linear function
- C.7** Gradients of parallel and perpendicular lines
- C.8** Graph a linear function
- C.9** Write linear equations in standard form
- C.10** Write linear equations in point-gradient form
- C.11** Write an equation for a parallel or perpendicular line
- C.12** Linear functions over unit intervals
- C.13** Complete a function table: absolute value functions
- C.14** Graph an absolute value function

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Simultaneous equations

Rational functions and expressions

- K.1** Rational functions: asymptotes and excluded values
- K.2** Evaluate rational expressions I
- K.3** Evaluate rational expressions II
- K.4** Simplify rational expressions
- K.5** Multiply and divide rational expressions
- K.6** Add and subtract rational expressions
- K.7** Solve rational equations

Function operations

- L.1** Add and subtract functions
- L.2** Multiply functions
- L.3** Divide functions
- L.4** Composition of linear functions: find a value
- L.5** Composition of linear functions: find an equation
- L.6** Composition of linear and quadratic functions: find a value
- L.7** Composition of linear and quadratic functions: find an equation
- L.8** Identify inverse functions
- L.9** Find values of inverse functions from tables
- L.10** Find values of inverse functions from graphs
- L.11** Find inverse functions and relations

Families of functions

- M.1** Translations of functions
- M.2** Reflections of functions
- M.3** Dilations of functions
- M.4** Transformations of functions
- M.5** Function transformation rules
- M.6** Describe function transformations

Logarithms

- N.1** Convert between exponential and logarithmic form: rational bases
- N.2** Evaluate logarithms
- N.3** Change of base formula
- N.4** Identify properties of logarithms
- N.5** Product property of logarithms

Circles

- U.1** Central angles
- U.2** Arcs and chords
- U.3** Tangent lines
- U.4** Inscribed angles
- U.5** Angles in inscribed right triangles
- U.6** Angles in inscribed quadrilaterals

Circles in the coordinate plane

- V.1** Find the centre of a circle
- V.2** Find the radius or diameter of a circle
- V.3** Write equations of circles in standard form from graphs
- V.4** Write equations of circles in standard form using properties
- V.5** Convert equations of circles from general to standard form
- V.6** Find properties of circles from equations in general form
- V.7** Graph circles

Sequences and series

- W.1** Classify formulas and sequences
- W.2** Find terms of an arithmetic sequence
- W.3** Find terms of a geometric sequence
- W.4** Find terms of a recursive sequence
- W.5** Evaluate formulas for sequences
- W.6** Write a formula for an arithmetic sequence
- W.7** Write a formula for a geometric sequence
- W.8** Write a formula for a recursive sequence
- W.9** Sequences: mixed review
- W.10** Introduction to sigma notation
- W.11** Identify arithmetic and geometric series
- W.12** Find the sum of a finite arithmetic or geometric series
- W.13** Introduction to partial sums
- W.14** Partial sums of arithmetic series
- W.15** Partial sums of geometric series
- W.16** Partial sums: mixed review
- W.17** Convergent and divergent geometric series

- D.1** Is (x, y) a solution to the simultaneous equations?
- D.2** Solve simultaneous equations by graphing
- D.3** Solve simultaneous equations by graphing: word problems
- D.4** Find the number of solutions to simultaneous equations
- D.5** Solve simultaneous equations using substitution
- D.6** Solve simultaneous equations using substitution: word problems
- D.7** Solve simultaneous equations using elimination
- D.8** Solve simultaneous equations using elimination: word problems
- D.9** Solve simultaneous equations using any method
- D.10** Solve simultaneous equations using any method: word problems
- D.11** Solve nonlinear simultaneous equations

Factorising

- E.1** Factorise out a monomial
- E.2** Factorise quadratics using algebra tiles
- E.3** Factorise quadratics
- E.4** Factorise using a quadratic pattern
- E.5** Factorise by grouping
- E.6** Factorise sums and differences of cubes
- E.7** Factorise polynomials

Quadratic functions

- F.1** Characteristics of quadratic functions
- F.2** Complete a function table: quadratic functions
- F.3** Find a quadratic function
- F.4** Graph a quadratic function
- F.5** Match quadratic functions and graphs
- F.6** Solve a quadratic equation using square roots
- F.7** Solve a quadratic equation using the zero product property
- F.8** Solve a quadratic equation by factorising
- F.9** Complete the square
- F.10** Solve a quadratic equation using the quadratic formula
- F.11** Using the discriminant

Complex numbers

- G.1** Introduction to complex numbers
- G.2** Add and subtract complex numbers
- G.3** Complex conjugates
- G.4** Multiply and divide complex numbers
- G.5** Add, subtract, multiply and divide complex numbers
- G.6** Absolute values of complex numbers
- G.7** Powers of i

- N.6** Quotient property of logarithms
- N.7** Power property of logarithms
- N.8** Properties of logarithms: mixed review
- N.9** Evaluate logarithms: mixed review

Exponential and logarithmic functions

- O.1** Domain and range of exponential and logarithmic functions
- O.2** Evaluate exponential functions
- O.3** Match exponential functions and graphs
- O.4** Solve exponential equations by rewriting the base
- O.5** Solve exponential equations using common logarithms
- O.6** Solve logarithmic equations I
- O.7** Solve logarithmic equations II
- O.8** Identify linear and exponential functions
- O.9** Exponential functions over unit intervals
- O.10** Describe linear and exponential growth and decay
- O.11** Exponential growth and decay: word problems
- O.12** Compound interest: word problems
- O.13** Continuously compounded interest: word problems

Parabolas

- P.1** Identify the direction a parabola opens
- P.2** Find the vertex of a parabola
- P.3** Find the focus or directrix of a parabola
- P.4** Find the axis of symmetry of a parabola
- P.5** Write equations of parabolas in vertex form from graphs
- P.6** Write equations of parabolas in vertex form using properties
- P.7** Convert equations of parabolas from general to vertex form
- P.8** Find properties of a parabola from equations in general form
- P.9** Graph parabolas

Angle measures

- Q.1** Convert between radians and degrees
- Q.2** Radians and arc length
- Q.3** Quadrants
- Q.4** Graphs of angles
- Q.5** Coterminal angles
- Q.6** Reference angles

Trigonometry

- R.1** Pythagoras' Theorem and its converse
- R.2** Special right triangles
- R.3** Trigonometric ratios: sin, cos and tan
- R.4** Trigonometric ratios: csc, sec and cot
- R.5** Trigonometric ratios in similar

- W.18** Find the value of an infinite geometric series
- W.19** Write a repeating decimal as a fraction

Probability

- X.1** Introduction to probability
- X.2** Theoretical and experimental probability
- X.3** Compound events: find the number of outcomes
- X.4** Factorials
- X.5** Calculate probabilities of events
- X.6** Counting principle
- X.7** Permutations
- X.8** Permutation and combination notation
- X.9** Find probabilities using permutations and combinations
- X.10** Find probabilities using two-way frequency tables
- X.11** Identify independent events
- X.12** Probability of independent and dependent events
- X.13** Geometric probability
- X.14** Find conditional probabilities
- X.15** Independence and conditional probability
- X.16** Find conditional probabilities using two-way frequency tables
- X.17** Find probabilities using the addition rule

Statistics

- Y.1** Mean, median, mode and range
- Y.2** Quartiles
- Y.3** Identify biased samples
- Y.4** Mean absolute deviation
- Y.5** Variance and standard deviation

Data and graphs

- Z.1** Interpret bar graphs for continuous data
- Z.2** Create bar graphs for continuous data
- Z.3** Interpret stem-and-leaf plots
- Z.4** Interpret box-and-whisker plots
- Z.5** Interpret a scatter plot
- Z.6** Scatter plots: line of best fit

Introduction to limits

- AA.1** Find limits using graphs
- AA.2** Find one-sided limits using graphs
- AA.3** Determine if a limit exists

Calculate limits

- BB.1** Find limits using addition, subtraction and multiplication laws
- BB.2** Find limits using the division law
- BB.3** Find limits using power and root laws
- BB.4** Find limits using limit laws
- BB.5** Find limits of polynomials and rational functions

Polynomials

- H.1** Polynomial vocabulary
- H.2** Add and subtract polynomials
- H.3** Multiply polynomials
- H.4** Divide polynomials using long division
- H.5** Solve polynomial equations
- H.6** Find the roots of factorised polynomials
- H.7** Write a polynomial from its roots
- H.8** Rational root theorem
- H.9** Descartes' Rule of Signs
- H.10** Match polynomials and graphs
- H.11** Fundamental Theorem of Algebra
- H.12** Pascal's triangle
- H.13** Pascal's triangle and the Binomial Theorem
- H.14** Binomial Theorem I
- H.15** Binomial Theorem II

Radical functions and expressions

- I.1** Roots of integers
- I.2** Roots of rational numbers
- I.3** Find roots using a calculator
- I.4** Nth roots
- I.5** Simplify radical expressions with variables I
- I.6** Simplify radical expressions with variables II
- I.7** Multiply radical expressions
- I.8** Divide radical expressions
- I.9** Add and subtract radical expressions
- I.10** Simplify radical expressions using the distributive property
- I.11** Simplify radical expressions using conjugates
- I.12** Domain and range of radical functions
- I.13** Solve radical equations

Rational indices

- J.1** Evaluate rational indices
- J.2** Multiplication with rational indices
- J.3** Division with rational indices
- J.4** Power rule
- J.5** Simplify expressions involving rational indices I
- J.6** Simplify expressions involving rational indices II

- R.5** Trigonometric ratios in similar right triangles
- R.6** Find trigonometric ratios using the unit circle
- R.7** Sin, cos and tan of special angles
- R.8** Csc, sec and cot of special angles
- R.9** Find trigonometric functions using a calculator
- R.10** Inverses of sin, cos and tan
- R.11** Inverses of csc, sec and cot
- R.12** Solve trigonometric equations I
- R.13** Solve trigonometric equations II
- R.14** Trigonometric ratios: find a side length
- R.15** Trigonometric ratios: find an angle measure
- R.16** Solve a right triangle
- R.17** Law of Sines
- R.18** Law of Cosines
- R.19** Solve a triangle
- R.20** Area of a triangle: sine formula
- R.21** Area of a triangle: Law of Sines

Trigonometric functions

- S.1** Find properties of sine functions
- S.2** Write equations of sine functions from graphs
- S.3** Write equations of sine functions using properties
- S.4** Graph sine functions
- S.5** Find properties of cosine functions
- S.6** Write equations of cosine functions from graphs
- S.7** Write equations of cosine functions using properties
- S.8** Graph cosine functions
- S.9** Graph sine and cosine functions

Trigonometric identities

- T.1** Complementary angle identities
- T.2** Symmetry and periodicity of trigonometric functions
- T.3** Trigonometric identities I
- T.4** Trigonometric identities II

- BB.6** Find limits involving factorisation and rationalisation
- BB.7** Find limits involving absolute value functions
- BB.8** Find limits involving trigonometric functions

Limits and rational functions

- CC.1** Find limits at vertical asymptotes using graphs
- CC.2** Determine end behaviour using graphs
- CC.3** Determine end behaviour of polynomial and rational functions
- CC.4** Find the limit at a vertical asymptote of a rational function I
- CC.5** Find the limit at a vertical asymptote of a rational function II

Continuity

- DD.1** Identify graphs of continuous functions
- DD.2** Determine continuity using graphs
- DD.3** Determine one-sided continuity using graphs
- DD.4** Find and analyse points of discontinuity using graphs
- DD.5** Determine continuity on an interval using graphs
- DD.6** Determine the continuity of a piecewise function at a point
- DD.7** Make a piecewise function continuous
- DD.8** Intermediate Value Theorem

Introduction to derivatives

- EE.1** Average rate of change I
- EE.2** Average rate of change II
- EE.3** Find instantaneous rates of change
- EE.4** Velocity as a rate of change
- EE.5** Find values of derivatives using limits
- EE.6** Find the gradient of a tangent line using limits
- EE.7** Find equations of tangent lines using limits
- EE.8** Power rule I
- EE.9** Power rule II
- EE.10** Find derivatives of polynomials
- EE.11** Find second derivatives of polynomials