

Year 7 End of Year Exams Revision List

Target 1-3

Number

- To be able to explain what each digit represents when reading and writing whole numbers
- To know how to use correctly the symbols less than, greater than or equal to and to be able to write correctly examples using these
- To be able to transfer understanding relating to place value to the context of decimals, for example money or measurement
- To know how to round positive integers up to 1 000 to the nearest 10 or 100, showing an understanding of the process and to be able to explain why rounding might be useful
- To be able to explain why using knowledge of calculating with near multiples of 10 can be a useful way of estimating more complex calculations
- To be able to use knowledge of multiplication tables (2, 3, 4, 5 and 10) and corresponding division facts to calculate or estimate mentally whether a calculation in context is likely to be reasonable
- To be able to recognise and extend number sequences
- To know how to recognise multiples of 2, 3, 4, 5 and 10
- To be able to explain the effect of multiplication and division by 10 or 100 when working with integers or decimals and to be able to do this mentally
- To be able to order decimals in a range of real life contexts, for example to order measurements, having converted them to the same unit
- To understand how to round positive whole numbers to the nearest 10 or 100 and decimals to the nearest whole number or to 1 decimal place and to be able to suggest a context where this may be useful.
- To have an understanding of negative numbers in a context such as temperature and to be able to use this in real life contexts such as comparing variations in climate.
- To be able to use knowledge of multiplication tables and corresponding division facts to calculate or estimate mentally whether a calculation in context is likely to be reasonable and to be able to suggest a context where this might be used

- To be able to recognise the first few triangular numbers, squares of numbers to 12×12 and the corresponding roots
- To know how to describe number relationships including multiple, factor and square
- To know how to recognise multiples of 6, 7, 8 and 9
- Be able to extend number sequences
- To know all the pairs of factors of any number up to 100
- To be able to apply tests of divisibility by 2, 4, 5, 10 or 100

Algebra

- To be able to describe and continue number sequences
- To understand how to generate simple number sequences
- To be able to recognise a wider range of sequences
- To be able to explain how to extend number sequences counting in steps of constant size and to be able to go beyond zero when counting back
- To know how investigate and to describe simple sequences in words and to construct a rule for continuing the sequence
- To be able to use and interpret coordinates in the first quadrant
- To be able to plot $x = ?$ and $y = ?$ Where $?$ is a positive integer
- To be able to read values from straight-line graphs for real-life situations
- To be able to recognise and continue sequences such as square or triangular numbers and be able to generate sequences from term to term or position to term rules.
- To understand and be able to explain how to construct simple rules for finding a term given its position in a sequence and to be able to show these using symbols
- To be able to use and interpret coordinates in all four quadrants
- To know how to generate coordinate pairs that satisfy a simple linear rule
- To understand how to plot the graphs of simple linear functions including for real-life situations
- To be able to express simple functions in symbols; represent mappings expressed algebraically
- To be able to find an unknown number in a simple case, for example a number plus 4 = 7 and to be able to generate similar simple examples

- To understand how to use symbols to represent unknown values in real life situations, for example two items cost £2.50, one item cost £1.75, how much was the other item?
- To begin to understand the role of the = sign
- To be able to explain the meaning of the words term, expression and equation and to be able to suggest an example of each
- To understand how to substitute values into an equation, for example, $a + b = 15$, what might be the values of a and b ? What else?...
- To know how to describe a formula in words
- To be able to use function machines to create expressions
- To know how to use simple formulae expressed in words
- To be able to use letter symbols to represent unknown numbers or variables
- To be able to simplify an expression by collecting like terms in simple cases
- To be able to find the inputs of simple functions expressed in words by using the output and inverse operations
- To understand how to simplify an expression by collecting like terms
- To be able to expand single brackets
- To be able to substitute values into simple formulae or expressions and explain the process
- To know how to generate simple equations from word problems and to be able to explain how to solve these
- To be able to explain the distinction between equations, formulae and functions
- To know how to construct and solve linear equations with integer coefficients using appropriate methods
- To understand how to substitute integers into simple formulae
- To be able to solve simple linear equations
- To be able to construct, express in symbolic form and use simple formulae involving one or two operations

Geometry

- To be able to identify all the symmetries of 2D shapes and to be able to draw or complete symmetrical patterns
- To be able to draw sketches of 2D shapes

- To understand how to classify shapes according to the number of right angles, whether or not they are regular and their symmetry properties
- To be able to explain what a right angle is and to have an understanding of angles measured in degrees
- To know the sum of angles on a straight line, around a point & in a triangle
- To be able to identify and use the correct notation for properties of shapes e.g. parallel lines
- To be able to use a ruler accurately
- To be able to describe the meaning of the words parallel and perpendicular and to be able to recognise and mark these on diagrams
- To be able to estimate the size of acute, obtuse and reflex angles and to be able to measure these accurately with a protractor
- To know the sum of angles on a straight line, around a point, in a triangle and to be able to explain how to use these to calculate unknown angles
- To be able to suggest suitable units to estimate or measure length, mass and capacity
- To be able to identify different nets of a cuboid
- To understand how to recognise perpendicular and parallel lines and properties of rectangles
- To be able to describe the meaning of the words acute, right angle, obtuse and reflex and to use these when estimating the size of angles
- To be able to use a protractor to measure and draw reflex angles
- To be able to recognise vertically opposite angles and to use this to solve problems involving unknown angles
- To be able to solve geometric problems using side and angle properties of equilateral and isosceles triangles
- To be able to use a ruler and protractor to construct simple nets of 3D shapes, using squares, rectangles and triangles
- To begin to use plans and elevations
- To understand how to apply knowledge of angles in practical contexts that are increasingly unfamiliar and including quadrilaterals
- To be able to draw or complete diagrams with a given order of rotational symmetry

Statistics

- To be able to collect and organise discrete data for a real life purpose for example collecting data about students in school
- To know how to represent data collected in a tally chart or frequency table
- To be able to extract and interpret information presented in simple tables, lists, bar charts and pictograms
- To know how to solve a simple problem by collecting, organising and representing data in tables, charts, graphs and diagrams, including those generated by a computer
- To be able to construct bar charts and pictograms, where the symbol represents a group of units
- To be able to construct tally charts and frequency tables
- To be able to find the mode from any bar chart
- To be able to calculate the mode and range from a small set of data
- To be able to use the vocabulary of probability to discuss the likelihood of events and be able to justify thinking
- To be able to identify tree diagrams and sample space diagrams
- To be able to design a data collection sheet and a questionnaire for grouped, discrete and continuous data
- To be able to interpret data in tables, graphs and charts and be able to draw simple conclusions based on the evidence
- To be able to find the modal group from a grouped bar chart
- To be able to solve a problem by representing and extracting and interpreting data in tables, graphs and charts
- To be able to use Venn and Carroll diagrams to record sorting and classifying of information
- To be able to draw a dual bar chart
- To know how to group data, where appropriate in equal class intervals
- To be able to interpret simple pie charts using simple fractions and percentages and multiples of 10% sections
- To understand and be able to use the mode and range from a bar chart
- To be able to calculate the mean, median, mode and range for continuous and discrete data

- To be able to find the modal class for a small set of grouped discrete data
- To understand the probability scale for 0 to 1 and to be able to use this when discussing the likelihood of events
- To be able to mark events and/or probabilities on a probability scale of 0 to 1
- To understand that a sample space diagram lists all the possible combinations of two events
- To understand which diagram, graph or chart is most appropriate for the data being presented
- To be able to communicate interpretations and results of a statistical survey using selected tables, graphs and diagrams in support
- To be able to use simple two way tables
- To be able to interpret and find the mode and total frequency from simple pie charts
- To be able to calculate the mode and range from a simple frequency table
- To be able to explain where sampling of data is appropriate and know how to do this
- To know and be able to use the fact that the sum of all mutually exclusive outcomes is 1 in solving problems, stretch to probability of something not happening
- To know the difference between experimental and theoretical probabilities and be able to compare these.
- To understand that the probability of an event not happening is $1-p$ (where p is the probability of it happening)
- To be able to work out probabilities from frequency tables
- To be able to find and justify probabilities based on equally likely outcomes in simple contexts
- To be able to identify all possible mutually exclusive outcomes of a single event
- To understand that different outcomes may result from repeating an experiment
- To be able to explain why, when estimating probabilities for experimental data, the greater the number of times the experiment is repeated, the better the estimate will be

Target 2-4

All students completing the target 2-4 must also be confident with all learning objectives for target 1-3

Number

- To be able to explain the effect of multiplication and division by 10 or 100 when working with integers or decimals and to be able to do this mentally
- To be able to order decimals in a range of real life contexts, for example to order measurements, having converted them to the same unit
- To understand how to round positive whole numbers to the nearest 10 or 100 and decimals to the nearest whole number or to 1 decimal place and to be able to suggest a context where this may be useful.
- To have an understanding of negative numbers in a context such as temperature and to be able to use this in real life contexts such as comparing variations in climate.
- To be able to use knowledge of multiplication tables and corresponding division facts to calculate or estimate mentally whether a calculation in context is likely to be reasonable and to be able to suggest a context where this might be used
- To be able to recognise the first few triangular numbers, squares of numbers to 12×12 and the corresponding roots
- To know how to describe number relationships including multiple, factor and square
- To know how to recognise multiples of 6, 7, 8 and 9
- Be able to extend number sequences
- To know all the pairs of factors of any number up to 100
- To be able to apply tests of divisibility by 2, 4, 5, 10 or 100
- To be able to apply simple tests of divisibility
- To be able to use rounding of whole numbers or decimals in real life contexts and to be able to explain the process and when it is useful/sensible
- To be able to generate examples of the use of rounding to make estimates and to be able to explain this
- To be able to use mental methods of calculation with decimals, fractions and percentages where these occur in real life problem solving situations

- To understand and be able to use the order of operations, including brackets
- To be able to apply inverse operations and approximate to check answers to problems are of the correct magnitude
- To know the squares of numbers up to 10×10
- To be able to recognise and use multiples, factors and primes (less than 100)
- Be able to calculate with negative numbers
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Algebra

- To be able to explain how to extend number sequences counting in steps of constant size and to be able to go beyond zero when counting back
- To know how investigate and to describe simple sequences in words and to construct a rule for continuing the sequence
- To be able to use and interpret coordinates in the first quadrant
- To be able to plot $x = ?$ and $y = ?$ Where $?$ is a positive integer
- To be able to read values from straight-line graphs for real-life situations
- To be able to recognise and continue sequences such as square or triangular numbers and be able to generate sequences from term to term or position to term rules.
- To understand and be able to explain how to construct simple rules for finding a term given its position in a sequence and to be able to show these using symbols
- To be able to use and interpret coordinates in all four quadrants
- To know how to generate coordinate pairs that satisfy a simple linear rule
- To understand how to plot the graphs of simple linear functions including for real-life situations
- To be able to express simple functions in symbols; represent mappings expressed algebraically
- To be able to recognise simple sequences including triangular, square, cube numbers and Fibonacci-type sequences
- To be able to recognise arithmetic sequences from diagrams and draw the next term in a pattern sequence

- To understand how to plot the graphs of linear functions, where y is given explicitly in terms of x
- To know that equations of the form $y = mx + c$ correspond to straight line graphs
- To be able to construct functions arising from real life problems and plot their corresponding graphs
- To understand how to interpret graphs arising from real life situations
- To be able to explain the meaning of the words term, expression and equation and to be able to suggest an example of each
- To understand how to substitute values into an equation, for example, $a + b = 15$, what might be the values of a and b ? What else?...
- To know how to describe a formula in words
- To be able to use function machines to create expressions
- To know how to use simple formulae expressed in words
- To be able to use letter symbols to represent unknown numbers or variables
- To be able to simplify an expression by collecting like terms in simple cases
- To be able to find the inputs of simple functions expressed in words by using the output and inverse operations
- To understand how to simplify an expression by collecting like terms
- To be able to expand single brackets
- To be able to substitute values into simple formulae or expressions and explain the process
- To know how to generate simple equations from word problems and to be able to explain how to solve these
- To be able to explain the distinction between equations, formulae and functions
- To know how to construct and solve linear equations with integer coefficients using appropriate methods
- To understand how to substitute integers into simple formulae
- To be able to solve simple linear equations
- To be able to construct, express in symbolic form and use simple formulae involving one or two operations
- To be able to solve linear equations, including those with brackets or involving negative signs or having a negative solution

- To be able to explain at least one method for solving linear equations
- To construct expressions from worded descriptions, using all four basic operations e.g. $30/x$, $x-y$, $3m+4$, ab

Geometry

- To be able to describe the meaning of the words parallel and perpendicular and to be able to recognise and mark these on diagrams
- To be able to estimate the size of acute, obtuse and reflex angles and to be able to measure these accurately with a protractor
- To know the sum of angles on a straight line, around a point, in a triangle and to be able to explain how to use these to calculate unknown angles
- To be able to suggest suitable units to estimate or measure length, mass and capacity
- To be able to identify different nets of a cuboid
- To understand how to recognise perpendicular and parallel lines and properties of rectangles
- To be able to describe the meaning of the words acute, right angle, obtuse and reflex and to use these when estimating the size of angles
- To be able to use a protractor to measure and draw reflex angles
- To be able to recognise vertically opposite angles and to use this to solve problems involving unknown angles
- To be able to solve geometric problems using side and angle properties of equilateral and isosceles triangles
- To be able to use a ruler and protractor to construct simple nets of 3D shapes, using squares, rectangles and triangles
- To begin to use plans and elevations
- To understand how to apply knowledge of angles in practical contexts that are increasingly unfamiliar and including quadrilaterals
- To be able to draw or complete diagrams with a given order of rotational symmetry
- To be able to identify alternate and corresponding angles and to be able to explain how to use these to solve problems
- To be able to solve harder problems using properties of angles, of parallel and intersecting lines, and of triangles and other polygons by looking at several shapes together

- To understand how to identify, calculate and use the interior and exterior angles of regular polygons in problem solving
- Know the definition of a circle and the names of its parts: explain why inscribed regular polygons can be constructed by equal divisions of a circle.
- To be able to use the sum of the interior angle and the exterior angle is 180°
- To know how to visualise and use 2D representations of 3D objects; analyse 3D shapes through 2D projections, including plans and elevations
- To be able to identify simple nets of 3D shapes

Statistics

- To be able to design a data collection sheet and a questionnaire for grouped, discrete and continuous data
- To be able to interpret data in tables, graphs and charts and be able to draw simple conclusions based on the evidence
- To be able to find the modal group from a grouped bar chart
- To be able to solve a problem by representing and extracting and interpreting data in tables, graphs and charts
- To be able to use Venn and Carroll diagrams to record sorting and classifying of information
- To be able to draw a dual bar chart
- To know how to group data, where appropriate in equal class intervals
- To be able to interpret simple pie charts using simple fractions and percentages and multiples of 10% sections
- To understand and be able to use the mode and range from a bar chart
- To be able to calculate the mean, median, mode and range for continuous and discrete data
- To be able to find the modal class for a small set of grouped discrete data
- To understand the probability scale for 0 to 1 and to be able to use this when discussing the likelihood of events
- To be able to mark events and/or probabilities on a probability scale of 0 to 1

- To understand that a sample space diagram lists all the possible combinations of two events
- To understand which diagram, graph or chart is most appropriate for the data being presented
- To be able to communicate interpretations and results of a statistical survey using selected tables, graphs and diagrams in support
- To be able to use simple two way tables
- To be able to interpret and find the mode and total frequency from simple pie charts
- To be able to calculate the mode and range from a simple frequency table
- To be able to explain where sampling of data is appropriate and know how to do this
- To know and be able to use the fact that the sum of all mutually exclusive outcomes is 1 in solving problems, stretch to probability of something not happening
- To know the difference between experimental and theoretical probabilities and be able to compare these.
- To understand that the probability of an event not happening is $1-p$ (where p is the probability of it happening)
- To be able to work out probabilities from frequency tables
- To be able to find and justify probabilities based on equally likely outcomes in simple contexts
- To be able to identify all possible mutually exclusive outcomes of a single event
- To understand that different outcomes may result from repeating an experiment
- To be able to explain why, when estimating probabilities for experimental data, the greater the number of times the experiment is repeated, the better the estimate will be
- To be able to criticise questions for a questionnaire
- To be able to interpret and/or compare bar graphs and frequency diagrams which are misleading (with false origins, different scales etc.)
- To be able to produce simple pie charts with two or three categories
- To be able to compare two distributions using the range of data
- To be able to calculate the mean, mode and range from a frequency table

- To understand how to find and record all possible mutually exclusive outcomes for single events and two successive events in a systematic way
- To be able to estimate the number of times an event will occur, given the probability and the number of trials
- To be able to write probabilities in words, fractions, decimals and percentages
- To be able to record, describe and analyse outcomes of events in tables and grids
- To be able to draw and use sample space diagrams
- To be able to work out probabilities from two-way tables

Target 3-5

All students completing the target 3-5 must also be confident with all learning objectives for target 1-3 and target 2-4

Number

- To be able to apply simple tests of divisibility
- To be able to use rounding of whole numbers or decimals in real life contexts and to be able to explain the process and when it is useful/sensible
- To be able to generate examples of the use of rounding to make estimates and to be able to explain this
- To be able to use mental methods of calculation with decimals, fractions and percentages where these occur in real life problem solving situations
- To understand and be able to use the order of operations, including brackets
- To be able to apply inverse operations and approximate to check answers to problems are of the correct magnitude
- To know the squares of numbers up to 10×10
- To be able to recognise and use multiples, factors and primes (less than 100)
- Be able to calculate with negative numbers
- To understand and be able to explain how to round numbers using significant figures and to use this to estimate (and justify) answers.
- To be able to solve problems mentally and to be able to explain and justify reasoning

- To understand how to enter numbers in a calculator and interpret the display in different contexts
- To know how to use a calculator efficiently and appropriately to perform complex calculations.
- To know how write numbers to 100 as a product of their prime factors
- To be able to calculate the HCF, LCM of numbers
- To be able to explain the effect of dividing by 0.1 or 0.01 and to be able to apply this understanding in examples such as calculating with weight or measurement
- Be able to estimate calculations by rounding numbers to one significant figure and multiplying or dividing mentally
- Be able to use the reciprocal key of a calculator
- Be able to use a calculator efficiently and appropriately to perform complex calculations with numbers of any size, knowing not to round during intermediate steps of a calculation; use the constant, pi and sign change keys, function keys for powers, roots and fractions, brackets and the memory
- To know the index laws when multiplying/dividing and $x^0 = 1$

Algebra

- To be able to recognise and continue sequences such as square or triangular numbers and be able to generate sequences from term to term or position to term rules.
- To understand and be able to explain how to construct simple rules for finding a term given its position in a sequence and to be able to show these using symbols
- To be able to use and interpret coordinates in all four quadrants
- To know how to generate coordinate pairs that satisfy a simple linear rule
- To understand how to plot the graphs of simple linear functions including for real-life situations
- To be able to express simple functions in symbols; represent mappings expressed algebraically
- To be able to recognise simple sequences including triangular, square, cube numbers and Fibonacci-type sequences
- To be able to recognise arithmetic sequences from diagrams and draw the next term in a pattern sequence

- To understand how to plot the graphs of linear functions, where y is given explicitly in terms of x
- To know that equations of the form $y = mx + c$ correspond to straight line graphs
- To be able to construct functions arising from real life problems and plot their corresponding graphs
- To understand how to interpret graphs arising from real life situations
- To be able to find the n th term of a linear sequence
- Be able to deduce properties of the sequences of triangular and square numbers from spatial patterns
- To be able to investigate the gradients of parallel lines and lines perpendicular to these lines
- Be able to plot quadratic graphs
- To be able to find the coordinates of the midpoint of a line from a given graph
- To be able to draw distance-time graphs and velocity-time graphs
- To be able to find the equation of a line (from a graph and through 2 points)
- To understand how to simplify an expression by collecting like terms
- To be able to expand single brackets
- To be able to substitute values into simple formulae or expressions and explain the process
- To know how to generate simple equations from word problems and to be able to explain how to solve these
- To be able to explain the distinction between equations, formulae and functions
- To know how to construct and solve linear equations with integer coefficients using appropriate methods
- To understand how to substitute integers into simple formulae
- To be able to solve simple linear equations
- To be able to construct, express in symbolic form and use simple formulae involving one or two operations
- To be able to solve linear equations, including those with brackets or involving negative signs or having a negative solution
- To be able to explain at least one method for solving linear equations

- To construct expressions from worded descriptions, using all four basic operations e.g. $30/x$, $x-y$, $3m+4$, ab
- Be able to link a graphical representation of an equation or a pair of equations to the algebraic solution; consider cases that have no solution or an infinite number of solutions
- Be able to factorise quadratic expressions using one or two brackets
- Be able to expand quadratic expressions using one or two brackets
- To be able to solve linear equations with integer coefficients in which the unknown appears on either side or both sides of the equation
- To be able to change the subject of a formula that involves factorising first
- To be able to select an expression, equation, formula and identity from a list

Geometry

- To be able to use a protractor to measure and draw reflex angles
- To be able to recognise vertically opposite angles and to use this to solve problems involving unknown angles
- To be able to solve geometric problems using side and angle properties of equilateral and isosceles triangles
- To be able to use a ruler and protractor to construct simple nets of 3D shapes, using squares, rectangles and triangles
- To begin to use plans and elevations
- To understand how to apply knowledge of angles in practical contexts that are increasingly unfamiliar and including quadrilaterals
- To be able to draw or complete diagrams with a given order of rotational symmetry
- To be able to identify alternate and corresponding angles and to be able to explain how to use these to solve problems
- To be able to solve harder problems using properties of angles, of parallel and intersecting lines, and of triangles and other polygons by looking at several shapes together
- To understand how to identify, calculate and use the interior and exterior angles of regular polygons in problem solving

- Know the definition of a circle and the names of its parts: explain why inscribed regular polygons can be constructed by equal divisions of a circle.
- To be able to use the sum of the interior angle and the exterior angle is 180°
- To know how to visualise and use 2D representations of 3D objects; analyse 3D shapes through 2D projections, including plans and elevations
- To be able to identify simple nets of 3D shapes
- Be able to identify co-interior angles and their values
- To be able to calculate both the interior and exterior angles of any polygon and be able to use the sum of interior angles
- To be able to solve geometric problems using side and angle properties of equilateral, isosceles and right-angled triangles
- To be able to deduce properties of simple 3D shapes from their 2D representations
- Be able to identify more complex nets of 3D shapes including irregular polyhedral
- Be able to analyse 3D shapes through cross-sections, plans and elevations
- Be able to draw plans and elevations of 3D shapes and use isometric paper to draw the shape in 3D

Statistics

- To understand which diagram, graph or chart is most appropriate for the data being presented
- To be able to communicate interpretations and results of a statistical survey using selected tables, graphs and diagrams in support
- To be able to use simple two way tables
- To be able to interpret and find the mode and total frequency from simple pie charts
- To be able to calculate the mode and range from a simple frequency table
- To be able to explain where sampling of data is appropriate and know how to do this

- To know and be able to use the fact that the sum of all mutually exclusive outcomes is 1 in solving problems, stretch to probability of something not happening
- To know the difference between experimental and theoretical probabilities and be able to compare these.
- To understand that the probability of an event not happening is $1-p$ (where p is the probability of it happening)
- To be able to work out probabilities from frequency tables
- To be able to find and justify probabilities based on equally likely outcomes in simple contexts
- To be able to identify all possible mutually exclusive outcomes of a single event
- To understand that different outcomes may result from repeating an experiment
- To be able to explain why, when estimating probabilities for experimental data, the greater the number of times the experiment is repeated, the better the estimate will be
- To be able to criticise questions for a questionnaire
- To be able to interpret and/or compare bar graphs and frequency diagrams which are misleading (with false origins, different scales etc.)
- To be able to produce simple pie charts with two or three categories
- To be able to compare two distributions using the range of data
- To be able to calculate the mean, mode and range from a frequency table
- To understand how to find and record all possible mutually exclusive outcomes for single events and two successive events in a systematic way
- To be able to estimate the number of times an event will occur, given the probability and the number of trials
- To be able to write probabilities in words, fractions, decimals and percentages
- To be able to record, describe and analyse outcomes of events in tables and grids
- To be able to draw and use sample space diagrams
- To be able to work out probabilities from two-way tables
- Identify possible sources of bias and plan how to minimise it

- To be able to interpret scatter graphs; recognise correlation, draw lines of best fit and estimate values from this.
- To be able to produce ordered back-to-back stem and leaf diagrams and calculate the median, mode and range
- To be able to use information provided to produce a two-way table
- To be able to estimate the mean from a grouped frequency table and understand why it is an estimate
- To be able to construct and use frequency polygons to compare sets of data
- To know the definition of random sampling and understand what is meant by sample and population
- To be able to use tree diagrams to calculate the probability of two independent events
- To be able to identify conditions for a fair game
- To be able to identify which graphs are the most useful in the context of the problem