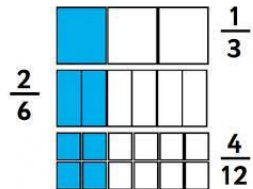
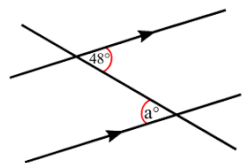


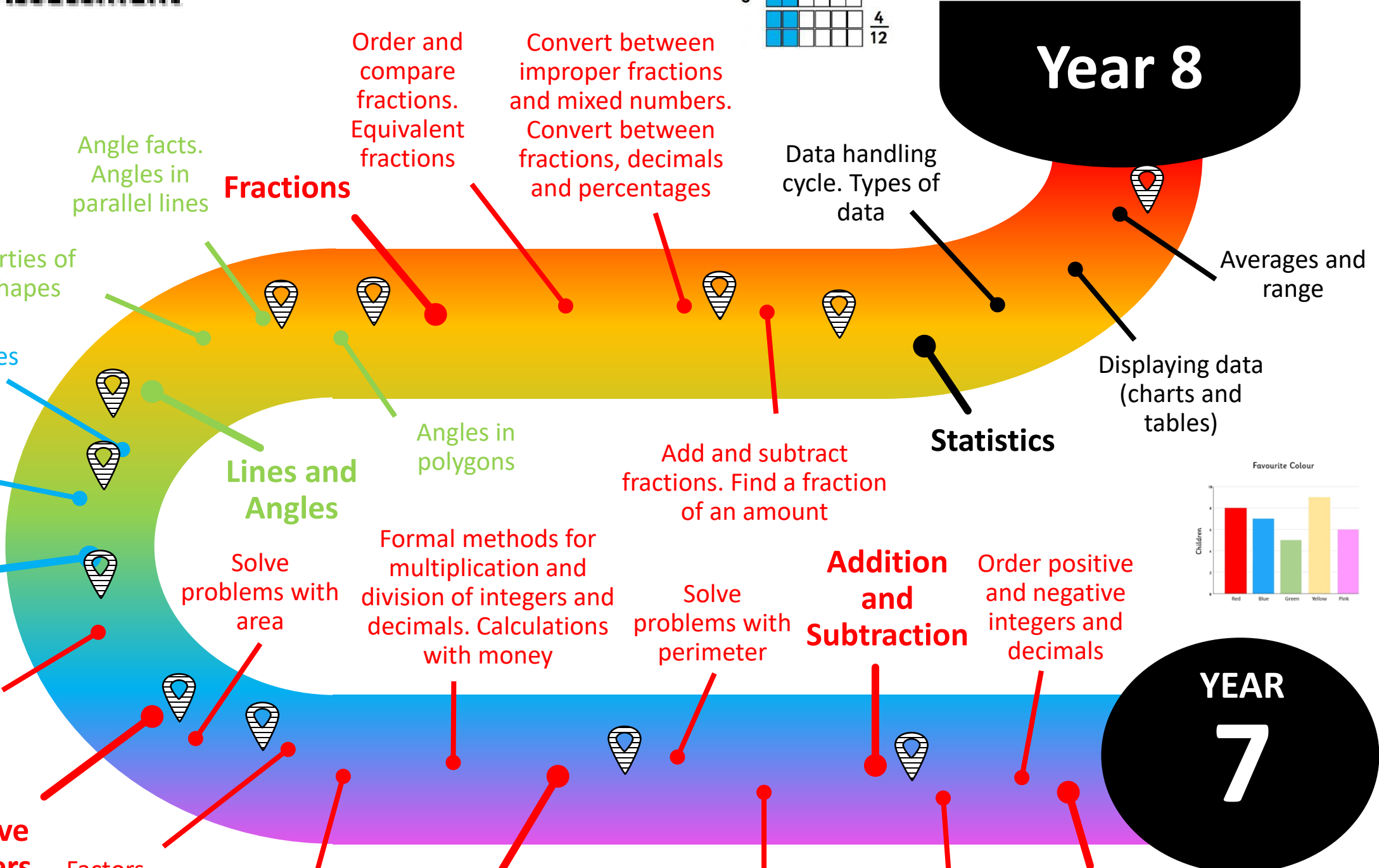
Year 7 Learning Journey

Key:
Assessment



Year 8

Mathematics Learning Journey



Fractions

Order and compare fractions. Equivalent fractions
Convert between improper fractions and mixed numbers. Convert between fractions, decimals and percentages

Lines and Angles

Angle facts. Angles in parallel lines
Properties of 2D shapes
Angles in polygons

Linear sequences

Use algebraic notation. Simplify, substitute and solve

Algebra

Four operations with negative numbers. Using the order of operations

Negative Numbers

Factors, multiples and primes

Powers and roots. Using the order of operations

Multiplication and Division

Formal methods for multiplication and division of integers and decimals. Calculations with money

Formal methods for addition and subtraction of integers and decimals. Calculations with money

Addition and Subtraction

Add and subtract fractions. Find a fraction of an amount

Solve problems with perimeter
Order positive and negative integers and decimals

Place Value

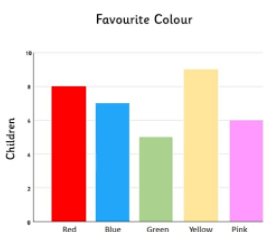
Rounding, estimation and error intervals

Statistics

Data handling cycle. Types of data

Averages and range

Displaying data (charts and tables)



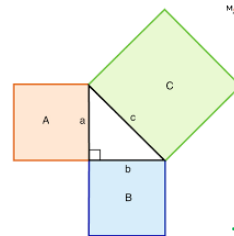
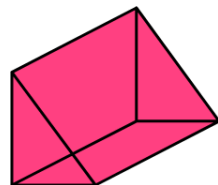
YEAR 7

	M	HTh	TTh	T	H	T	O	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
Millions	0	0	0	0	0	0	0	0	0	0
Hundred Thousands										
Ten Thousands										
Thousands										
Hundreds										
Tens										
Ones										
Tenths										
Hundredths										
Thousandths										



Year 8 (H) Learning Journey

Key:
Assessment

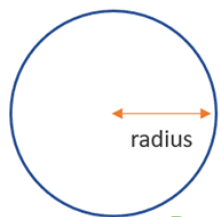


Pythagoras' Theorem to find longest and shortest sides

Year 9

Mathematics

Learning Journey



Perimeter and area of 2D shapes and circle

Volume and surface area of prisms

Ratio and proportion

Powers and roots

Fractions, decimals and percentages

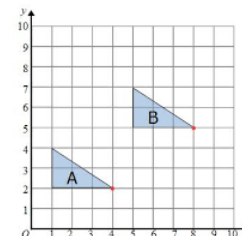
Time and distance time graphs

Converting units

Linear sequences, recognise other sequences

Prime factor decomposition, HCF and LCM

Symmetry and transformations



Percentage increase/decrease, interest

Coordinates and linear graphs

Fractions and mixed numbers, simple algebraic fractions

Construction

Solving linear equations & inequalities

Rounding and estimation, standard form

Probability including 2 way tables, Venn diagrams and sample space diagrams

Averages and range, including from frequency tables

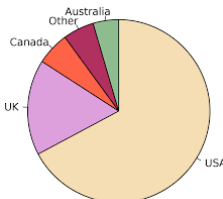
Representing data in statistical diagrams

Compare fractions, operations with fractions, including mixed numbers

Angle facts, angles in polygons and bearings

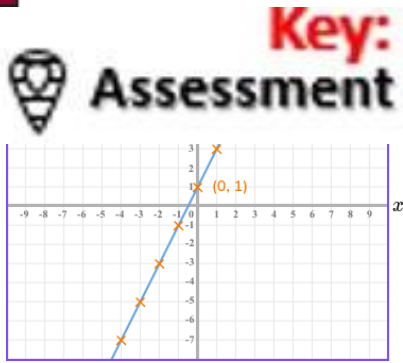
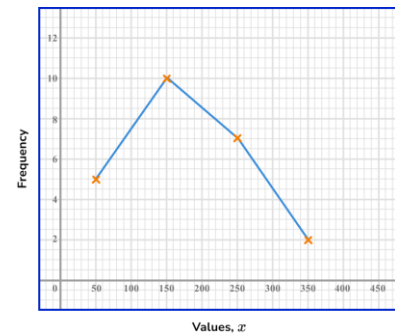
Expanding 2 brackets and factorising, laws of indices

Operations with decimals and negative numbers, multiplication and division facts



YEAR 8

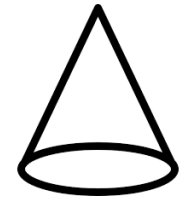
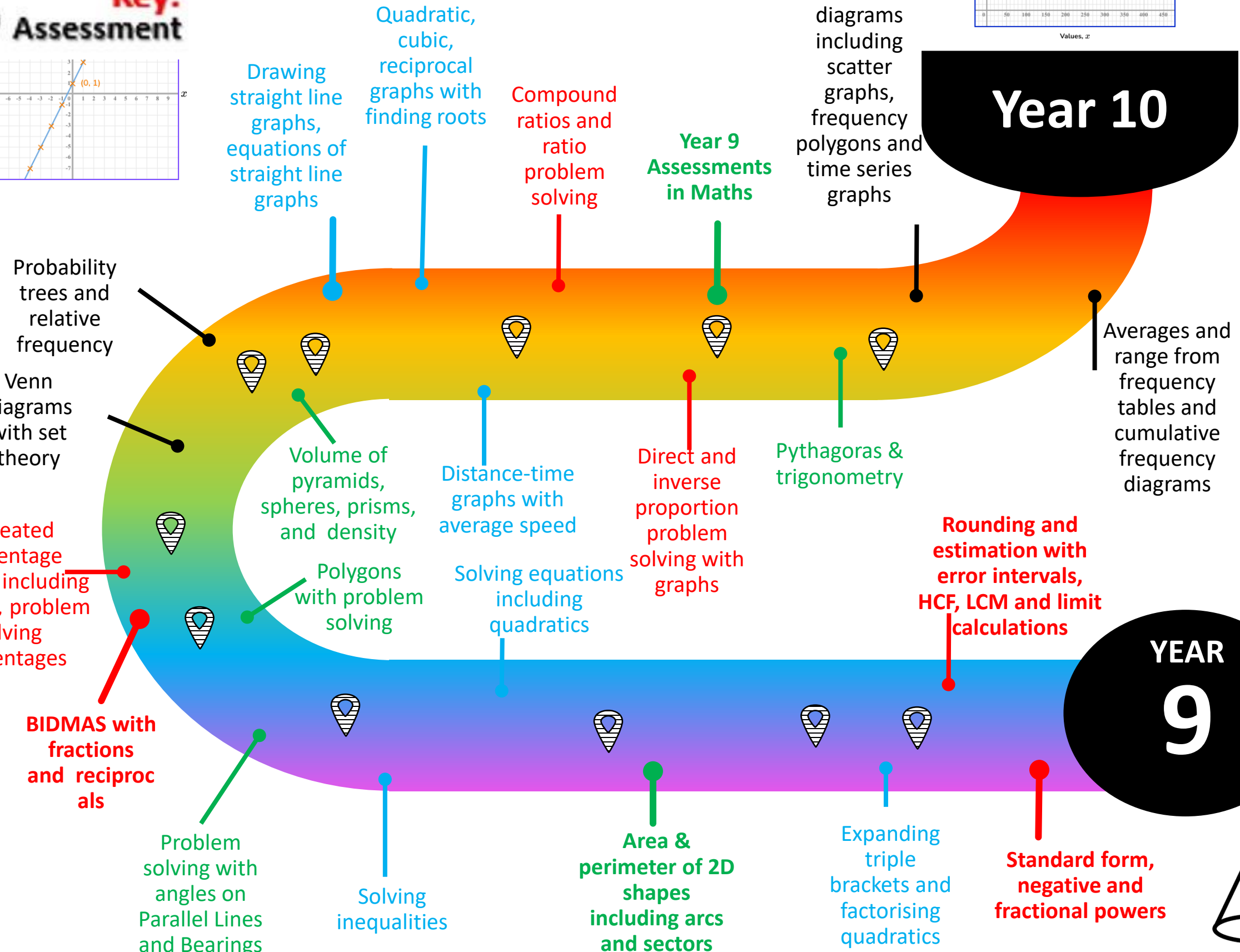
Year 9 (H) Learning Journey



Mathematics Learning Journey

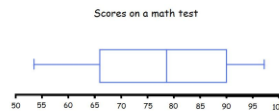
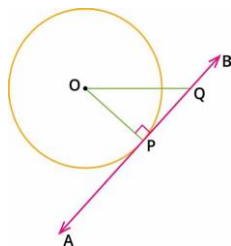
Year 10

YEAR 9



Year 10H Learning Journey

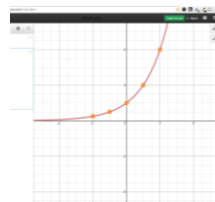
Key:
Assessment



Year 11

Mathematics

Learning Journey



Non-linear graphs & real life graphs

Circle theorems

Solving simultaneous equations by elimination and substitution

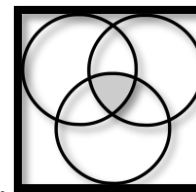
Cumulative frequency, box plots & histograms

Linear & quadratic sequences

Year 10 Exams

Transformations
Constructions & loci

Functions, inverse functions & composite functions



Algebraic fractions including simplifying & equations

Surface area of spheres, cones, pyramids & prisms

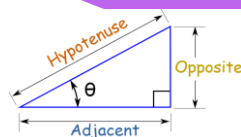


Surds including brackets and rationalisation

Probability including independent and dependent events. Set notation with Venn

Changing the subject

Linear inequalities.



Pythagoras & trigonometry including 3D and non calculator questions

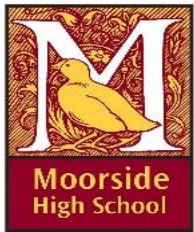
$$y = mx + c$$

Parallel and perpendicular lines

Direct and inverse proportion with algebra. Ratio with algebra. Graphs of proportion

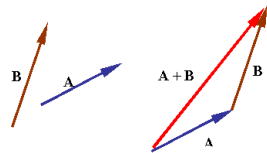
Inequalities & regions

YEAR 10



Year 11 Higher Learning Journey

Key:
Assessment



Vectors

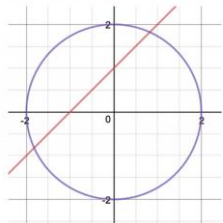
Calculating with column vectors
Finding a resultant vector
Use vectors to prove lines are parallel
Solve problems in vector geometry

Future Pathways

Proof
Prove that a statement is true by using algebra
Prove circle theorems

Simultaneous equations

To solve non linear simultaneous equations by substitution



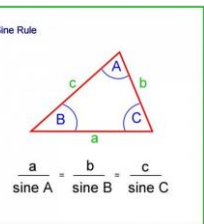
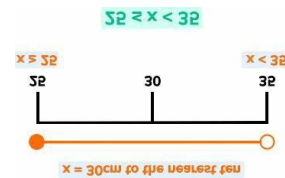
Iteration

Rearranging to find an iterative formula
Use iteration to solve equations

Mocks

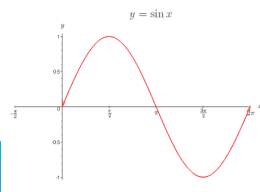
Limits

Identify the upper and lower bounds of a value
Write error intervals
Calculate max and min possible answers using bounds



Trigonometry

Apply the Sine rule to non right angled triangles
Apply the Cosine rule to non right angled triangles
Use trig to find the area of a triangle



Graphs

Drawing and using graphs of Trig functions
Transforming graphs

Find the gradient of a curve and the area under a curve
Use the equation of a circle and find the equation of a tangent to the circle

Inequalities

Solving Quadratic inequalities algebraically and graphically

YEAR 11

Mathematics

Learning Journey

