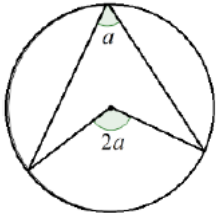
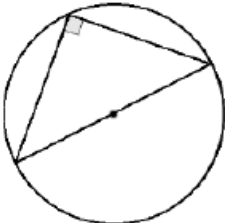
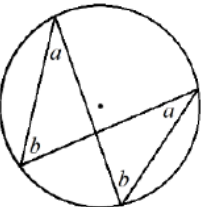
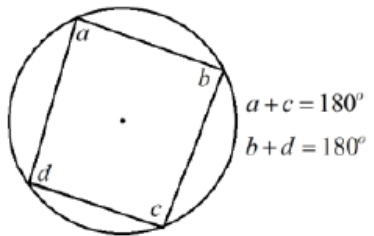
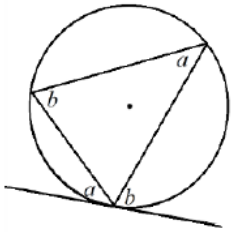
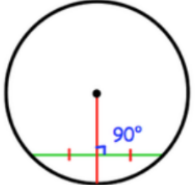
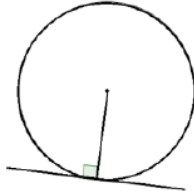
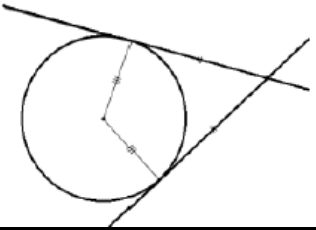


Circle Theorems			
1	Tangent	A straight line that touches the circumference of a circle.	
2	Chord	A line segment connecting two points on a circle's circumference.	
3	Segment	A part of a circle made when cut by a chord.	
4	Angle at the Centre Theorem	The angle at the centre of a circle is twice the angle at any point on the circumference.	
5	Angles in a Semi-circle Theorem	The angle in a semi-circle is a right angle.	
6	Angles in the same segment Theorem	Angles in the same segment are equal.	
7	Cyclic Quadrilateral	Opposite angles of a cyclic quadrilateral sum to 180°.	

Proof

8	Alternate Segment Theorem	The angle between the chord and the tangent is equal to the angle in the alternate segment.	
9	Radius Bisects Chord	The radius will bisect a chord at 90°.	
10	Tangent angle Theorem	The angle between a tangent and the radius is 90°	
11	Equal Tangent Theorem	The tangents to a circle from the same point are equal in length.	
Surds			
1	Surds	A number that cannot be simplified to remove a square or cube root.	
2	Rationalise	A process to eliminate an irrational number from the denominator of a fraction.	
3	Simplify fractions	Divide the numerator and denominator by the highest common factor.	

Year 11 Higher Unit 2 Knowledge Organiser – Circle Theorems and Geometry, Changing the Subject, Algebraic Fractions, Rationalising Surds, Proof, Vectors and Geometric Proof

4	Adding and subtracting fractions	Use equivalent fractions to change each fraction to the common denominator, then add or subtract the numerators, keeping the denominator the same.
5	Multiply Fractions	Multiply the numerators, multiply the denominator and simplify.
6	Divide Fractions	KFC – keep the first fraction the same, F – flip the second fraction, C- change the divide to a multiply.

Proof

1	Proof	A mathematical statement showing that the stated assumption logically guarantees the conclusion.
2	Consecutive integers	$n, n+1$
3	Even number	$2n$
4	Odd number	$2n + 1$

Functions

1	Function	A special relationship where each input has a single output.
2	Inverse function	A function that undoes the action of another function.
3	Composite function	A function made of other functions, where the output of one is the input of another.

Vectors

1	Vector	A quantity represented by an arrow with both direction and magnitude.
2	Magnitude	The length of a vector.
3	Vector notation	Vectors are written using lower case letters.
4	Equal vectors	If two vectors have the same magnitude and direction, they are equal.
5	Parallel vectors	Are multiples of each other.
6	Negative vectors	A parallel vector, in the opposite direction. \mathbf{a} is parallel to $-\mathbf{a}$.
7	Collinear Vectors	Vectors that are on the same line.

Proof

8	Resultant vector	The result from adding two or more vectors together.
9	Scalar	A scalar is the number we multiply a vector by.