

Keywords: Autumn 2 Year 11 Maths

Topic Title: Algebra, Quadrilaterals, and circles

- Quadratics: To be able to solve quadratic equations using graphs and by completing the square.
- Circles: To be able to solve circle theorem problems including proof.

• Tangents: To be able to find the equation of a tangent.

| Keyword | Definition | |
|-----------------|---|--|
| Quadratic | Equations involving the power of 2 | |
| | i.e. $ax^2 + bx + c = 0$ | |
| Transformations | A general term for four specific | |
| | ways to manipulate the shape | |
| | and/or position of a point, a line, | |
| | or geometric figure. These are | |
| | reflections, translations, rotations, enlargements. | |
| Diameter | The distance from one point on a | |
| | circle through the centre to | |
| | another point on the circle. | |
| Tangent | A line that touches the circles | |
| | outside edge at only one point. | |
| Chord | A straight line that joins one edge | |
| | of the circle to another edge, but | |
| | does not go through the centre. | |
| Segment | The region that is bounded by an | |
| | arc and a chord of the circle. | |
| Sector | The portion of a circle that is | |
| | enclosed between two radii and the | |
| | edge of the circle. | |
| Roots | A solution to an equation, usually | |
| | expressed as a number or an | |
| | algebraic formula. | |
| Proof | Logical mathematical arguments | |
| | used to show the truth of a | |
| | mathematical statement. This is | |
| | usually done using algebra. | |