Stage 11 – Algebraic Proficiency: Visualising II

WHAT DO WE ALREADY know?

- Complete the square for a given quadratic expression.
- Know the meaning of roots, intercepts and turning points.
- Identify and interpret roots, intercepts, turning points of quadratic functions graphically.
- Interpret the gradient at a point on a curve as the instantaneous rate of change.
- Know the effects of transforming $y = f(x)$: $f(x) + a$ and $f(x + a)$.

THE BIG PICTURE

- Apply the concepts of average and instantaneous rate of change in numerical, algebraic and graphical contexts
- Solve practical problems involving rates of change

KEYWORDS

- Function
- Complete the square
- Deduce - early 15c., *deducen*, "to show, prove, demonstrate;"
- Root
- Turning point
- Minimum,
- Maximum
- Rate of change
- Chord
- Tangent - 1590s, "meeting at a point without intersecting," from Latin tangentem
- Average rate of change
- Instantaneous rate of change

Algebraic Proficiency: Visualising II - Targets	Before Topic	After Topic	Teacher Mark
Apply the concept of average rate of change in numerical, algebraic and graphical contexts.			
Apply the concept of instantaneous rate of change in numerical, algebraic and graphical contexts.			
Solve practical problems involving rates of change.			