Stage 10 – Algebraic Proficiency: Visualising I

WHAT DO WE ALREADY *know*?

- Plot graphs of linear, quadratic, cubic and reciprocal functions.
- Interpret the gradient of a straight line graph as a rate of change.
- Plot and interpret graphs of kinematic problems involving distance and speed.

- Recognise, plot and interpret graphs and use them to solve simple kinematic problems.
- Understand, calculate and interpret the gradient.
- Solve problems involving the gradients of graphs in context.
- Calculate and solve problems involving the area under graphs in context.
- Identify and interpret roots, intercepts and turning points of quadratic functions graphically.

- Function
- Equation
- Linear
- Quadratic
- cubic
- Reciprocal
- Exponential
- Parabola
- Asymptote
- Gradient
- Intercept
- Kinematic

Algebraic Proficiency: Visualising I - Targets	Before Topic	After Topic	Teacher Mark
Recognise, plot and interpret exponential graph and graphs of non-standard functions.			
Use graphs of non-standard functions to solve simple kinematic problems.			
Recognise that the gradient of a curve is not constant and know that the gradient of a curve is the gradient of the tangent at that point. Be able to calculate the gradient at a point on a curve.			
Interpret the gradient at a point on a curve as the instantaneous rate of change and the gradient of a chord as an average rate of change. Solve problems involving the gradients in context.			
Calculate an estimate for the area under a graph including the area under a speed-time graph as distance. Solve problems about this in context.			
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