

3.6 Unit M7: Higher Tier Completion Test

This unit targets grades B, C*, C, D, and E at GCSE level.

Students should know the content of Units M1, M2, M3, M5 and M6 before taking this unit.

Content	Learning Outcomes
Number and algebra	<p>Students should be able to:</p> <ul style="list-style-type: none"> ● use surds and π in exact calculations; ● use index notation and index laws for zero, positive and negative powers; ● interpret, order and calculate with numbers written in standard index form; ● use index laws in algebra for integer powers; ● set up and solve two linear simultaneous equations algebraically; ● solve linear inequalities in two variables representing the solution set on a graph; ● change the subject of a formula, including cases where a power or root of the subject appears and cases where the subject appears in more than one term; ● find the nth term of non-linear sequences; ● recognise, sketch and interpret graphs of linear functions, quadratic functions, simple cubic functions and the reciprocal function $y = \frac{a}{x}$ with $x \neq 0$; ● generate points and plot graphs of simple quadratic functions and use these to find approximate solutions for points of intersection with lines of the form $y = mx + c$; and ● set up equations and solve problems involving direct proportion, including graphical and algebraic representations.

Content	Learning Outcomes
<p>Geometry and measures</p>	<p>Students should be able to:</p> <ul style="list-style-type: none"> ● describe and transform 2D shapes using combined transformations; ● describe and transform 2D shapes using reflections in the lines $y = \pm x$; ● describe and transform 2D shapes using enlargements by a fractional scale factor; ● understand and use the effect of enlargement on the volume of solids; ● use the relationship between the ratios of lengths and areas of similar 2D shapes;
<p>Handling data</p>	