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| **Year 1 pure unit 8: Integration** | **Road Map** |
| In this unit you will learn about pure mathematics. The aims are as follows:**LG1**: Knowledge**LG2**: Application**LG3**: Skills | Assessment Grades |  |  |
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| **Themes** | **Learning Goals/Outcomes/Content** |  |  |  |
| **8a. Definition as opposite of differentiation, indefinite integrals of *xn*** | know and be able to use the Fundamental Theorem of Calculus; |  |  |  |
| be able to integrate $x^{n}$ (excluding *n* = −1), and related sums, differences and constant multiples. |  |  |  |
| **8b. Definite integrals and areas under curves** | be able to evaluate definite integrals; |  |  |  |
| be able to use a definite integral to find the area under a curve. |  |  |  |

**Links:**

LG1: You should know how to integrate functions. You will learn how to find both definite and indefinite integrals.

LG2: You should be able to apply your knowledge of integration to evaluate areas under curves and explain the need for a constant in an indefinite integral.

LG3: You will solve a variety of routine and non-routine problems linking different areas of Mathematics. For example, given the area under part of a curve you should be able to use integration to find the coordinates of one of the points of intersection with the x axis.