# Level 3 Calculus 2024 (13MC1 / 13MAC)

*Course Information*
Calculus is the mathematical study of change, in the same way that geometry is the study of shape and algebra is the study of operations and their application to solving equations. It has two major branches, differential calculus (concerning rates of change and slopes of curves), and integral calculus (concerning accumulation of quantities and the areas under and between curves); these two branches are related to each other by the fundamental theorem of calculus. In this course you will learn both of these areas along with complex numbers and advanced trigonometry.

*Resources and equipment required*
You will need 2 × 1J5 exercise books, red and blue pens, a ruler and a Casio Graphical Calculator for the NCEA/scholarship examinations.

*Assessment*
The following standards will be offered and assessed. Please note that assessment dates may change due to unforeseen circumstances.

| Registered Number | Standard Title | Credits | Assessment Mode | Assessment Timeline | Further Assessment Opportunities |
|---|---|---|---|---|---|
| 91575 | Apply trigonometric methods in solving problems | 4 | Internal | Term 2 – Week 3 / 4 | No |
| 91577 | Apply the algebra of complex numbers in solving problems | 5 | External | Term 4 | No |
| 91578 | Apply differentiation methods in solving problems | 6 | External | Term 4 | No |
| 91579 | Apply integration methods in solving problems | 6 | External | Term 4 | No |

*Scholarship*
Students will be invited into the scholarship calculus programme in the middle of term 1 room and time TBC. Information regarding scholarship calculus and resources can be found via:
http://www.nzqa.govt.nz/qualifications-standards/awards/scholarship/scholarship-subjects/scholarship-mathematics-with-calculus

*NZQA Mathematics Subject Resources*
http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/subjects/mathematics/levels

*School Policy for Assessment*
Students should be aware of the school procedures for assessment.  They can be found on
http://wc.school.nz/about-us/academic/assessment along with the forms for appeals.

*Contact*
We hope you have a successful and interesting year. Please do not hesitate to ask questions.
Mr Kasper Black is in charge of Calculus – please feel free to contact him via: k.black@wc.school.nz