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| **F Unit 12: Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations** | | **Year 11 Road Map** | | | | |
| In this unit you will learn about Algebra. The aims are as follows:  **LG1**: Knowledge  **LG2**: Application  **LG3**: Skills  Assessment Grades | | | | | | |
|  | **Learning Goals/Outcomes/Content** | | Video clips | R A G |  |  |
| 1 | Know the difference between an equation and an identity and use and understand the ≠ symbol; | | 137 |  |  |  |
| 2 | Change the subject of a formula involving the use of square roots and squares; | | 190 |  |  |  |
| 3 | Answer ‘show that’ questions using consecutive integers (*n*, *n* + 1), squares *a*2, *b*2, even numbers 2*n*, and odd numbers 2*n* +1; | | 193 |  |  |  |
| 4 | Solve problems involving inverse proportion using graphs, and read values from graphs; | | 199 |  |  |  |
| 5 | Find the equation of the line through two given points; | | 159a, 159b |  |  |  |
| 6 | Recognise, sketch and interpret graphs of simple cubic functions; | | 161 |  |  |  |
| 7 | Recognise, sketch and interpret graphs of the reciprocal function  with *x* ≠ 0; | | 161 |  |  |  |
| 8 | Use graphical representations of indirect proportion to solve problems in context; | | 199 |  |  |  |
| 9 | identify and interpret the gradient from an equation *ax* + *by* = *c*; | | 159a, 159b |  |  |  |
| 10 | Write simultaneous equations to represent a situation; | | 162 |  |  |  |
| 11 | Solve simultaneous equations (linear/linear) algebraically and graphically; | | 140, 162 |  |  |  |
| 12 | Solve simultaneous equations representing a real-life situation, graphically and algebraically, and interpret the solution in the context of the problem; | | 140, 162 |  |  |  |
| Student’s comments and or questions | | | | | | |