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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**: SkillsAssessment 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 |