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| **F Unit 5b: Multiplicative Reasoning** | | **Year 10 Road Map** | | | | |
| In this unit you will learn about number and measures. The aims are as follows:  **LG1**: Knowledge **LG2**: Application **LG3**: Skills  Assessment Grades | | | | | | |
|  | **Learning Goals/Outcomes/Content** | | Video clips | R A G |  |  |
| 1 | Understand and use compound measures: | |  |  |  |  |
| 2 | density; pressure; speed | | 142a  142b  142c |  |  |  |
| 3 | convert between metric speed measures; | | 142a |  |  |  |
| 4 | read values in km/h and mph from a speedometer; | | 142a |  |  |  |
| 5 | calculate average speed, distance, time – in miles per hour as well as metric measures; | | 142a |  |  |  |
| 6 | use kinematics formulae from the formulae sheet to calculate speed, acceleration (with variables defined in the question); | | 95 |  |  |  |
| 7 | change d/t in m/s to a formula in km/h, i.e. d/t × (60 × 60)/1000 – with support; | | 142a |  |  |  |
| 8 | Express a given number as a percentage of another number in more complex situations; | | 40 |  |  |  |
| 9 | Calculate percentage profit or loss; | | 109 |  |  |  |
| 10 | Make calculations involving repeated percentage change, not using the formula; | | 88, 89, 108 |  |  |  |
| 11 | Find the original amount given the final amount after a percentage increase or decrease; | | 110 |  |  |  |
| 12 | Use compound interest; | | 164 |  |  |  |
| 13 | Use a variety of measures in ratio and proportion problems: currency conversion; rates of pay; best value; | | 41, 105 |  |  |  |
| 14 | Set up, solve and interpret the answers in growth and decay problems; | | 164 |  |  |  |
| 15 | Understand that *X* is inversely proportional to *Y* is equivalent to *X* is proportional to ; | | 199 |  |  |  |
| 16 | Interpret equations that describe direct and inverse proportion. | | 199 |  |  |  |

**Student’s comments or questions**