**Year 11 / 12 Term 1**

**Credit and Borrowing:**

**Simple Interest Formula:**

Where P is the Principal, R is the rate of interest, and T is the time period of the loan or deposit (years).

**Terminology:**

p.a = per annum (yearly)

**Example Question:** Calculate the total simple interest paid with a principal of $2000, at a rate of 5% p.a for 5 years.

**Example Question:** Calculate the amount of time it would take to repay a loan (simple interest), with a principal of $5000, at 10% p.a interest with a total interest payable of $2000.

**Annuities and Loan Repayments:**

**Future Value Formula:**

Where FV is the future value, PV is the present value, r is the annual interest rate, and n is the number of periods that interest held.

**Question 1:** What is the future value of an annuity with a contribution of $100 per year for 15 years if the interest rate is 10% p.a ?

**Question 2:** What is the future value of an annuity with a contribution of $2000 per 6 months for 20 years if the interest rate is 8% p.a ?

Question 4: In 8 years time a business plans to replace its fittings and fixtures. It is estimated that the replacement will cost $15000. How much does the business need to save per year if it receives 6 % p.a. compounded annually on their savings?