Real Life Applications of Financial Maths

- Applied Arithmetic is the mathematics of finance. It involves percentages, income tax, currency exchange, compound interest and profit and loss.

1) If you're going on holidays to another country you will probably need to change some euro for another currency. Exchange rates are normally shown in a table like on the right. You can see that numbers are corrected to 4 decimal places. These extra decimal places make little difference to small sums of money but can have an impact when you're changing larger sums of money. Check out www.xe.com for the latest exchange rates.

2) Nearly every citizen of a country has to pay a certain amount of tax to the government every year. Taxes are used by the government to pay for many things like education, health, unemployment benefit and old age pensions. Corporation tax is a tax paid by companies on all profits they make if they operate in this country and Ireland is infamous for its very low corporation tax of 12.5%, which is one of the lowest in the world! The Revenue Commissioners look after the collection of taxes and you can find out anything you want to know about income tax by clicking here: http://www.revenue.ie/en/index.html

3) All companies are interested in profit and loss. Simply put, companies need to take in more money than they spend, in order to make a profit. If they don't succeed in doing this, then they are making losses, and inevitably this leads to workers being made redundant, down-sizing their operations, or possibly closure. The record for the most profitable company in the world was ExxonMobile (an oil and gas industry) in the U.S.A, who had made profits of over $45 billion by 2008! The biggest losses on record are AOL Time Warner (a media company in the U.S.) who had reported losses of $98 billion up to 2002.

ExxonMobil

Esso Mobil

4) When someone buys a house they usually borrow the money from a bank or building society to pay for the house up front. This is known as a mortgage. Most banks or other lenders will lend about 85-88% of the price of the house so buyers need to produce the other 12-15% themselves. Buyers then pay back the mortgage over the next 10 - 35 years. The interest owing on a mortgage is calculated in a similar way to the way compound interest calculations are done.