Loans

1. Calculate the monthly repayments required for a mortgage of €200 000, paid over a 30 year period at an annual interest rate of 6%.

2. Alice wants to take out a 20-year mortgage. The average interest rate over the lifetime of the mortgage is 8% per annum. Alice can afford repayments of €850 per month. What is the largest mortgage she can afford?
   Give your answer to the nearest €100.

3. What is the monthly payment, correct to the nearest euro, on a mortgage of €75 000, assuming an interest rate of 8% , for
   (a) 20 years
   (b) 25 years
   (c) 30 years ?

4. Your local car dealer offers you two different payment plans to buy a €15 000 car.
   Plan A : A 10% discount on the price of the car and a loan on the balance at an annual rate of 9% for 5 years.
   Plan B : No discount but a loan for the total price €15 000 at an annual rate of 3% for 5 years.
   Which plan should you opt for?

5. A woman has saved €250 000 to fund a pension and she now plans to retire. She wishes to draw down equal annual instalments from these savings for the next 25 years. Assuming a 5% interest rate, calculate the value of each yearly instalment.

6. Two people want to buy your house. The first person offers you €200 000 now. The second person offers you 25 annual payments of €15 000 each. Assuming you can get an annual rate of 5% on your money, which offer should you accept?

7. Malcom needs €400 per month, for 3 years, while he studies at college. What amount of money do his parents need to invest, at 6.6% p.a. compounded monthly, to provide the money that malcom needs?