

## **Exercise Set: Time Value of Money**

## Present value

- 1) You will receive 100€ one year from now. What is the present value of that money with a 5% interest rate?
- 2) You have a surf board to sell. Bidder A pays you 200€ immediately. Bidder B pays you 220€ three years from now. The interest rate in the market is 3%. To whom will you sell your board?
- 3) At an annual interest rate of 5% how many years does it take for an investment of 1.00€ to grow to 1.80€?
- 4) How much money do you have to deposit today in a bank account that pays you 4% (stated annual), compounded every month, if you need to withdraw 50,000€ from that account 4 years from now?
- 5) You deposit today 5,000€ in a bank account that pays you an interest rate of 2% (stated annual), compounded every quarter, during 5 years. How much money do you have within 5 years?
- 6) You deposit today 10,000€ in a bank account that pays you an interest rate of 3%, compounded every quarter. How many quarters do you have to wait to have at least 30,000€?
- 7) You will receive 500€ one year from now. What is the present value of that money with a 3% interest rate?