2 Zins- und Zinseszinsrechnung

Englische Aufgaben

Remark: You may omit the capital yields tax, unless it is asked for explicitly.
[to omit sth. … etwas nicht berücksichtigen; capital yields tax … Kapitalertragsteuer (KEST)]

2.1 Mrs. Miller has a seed capital of 5000€.

a. Compute the total amount of money Mrs. Miller's capital runs up to, if it is invested for 6 years with an interest rate of 4.3% p.a.

b. After four years the bank cuts interest rates to 3.5%. Calculate the sum Mrs. Miller has to pay additionally at the beginning of the fifth year, in order to get the same amount of money after 6 years she would have before the cut.

c. Calculate the interest rate necessary, if Mrs. Miller wants to command a sum of 7000€ after 6 years.

[seed capital … Startkapital; to run up to … anwachsen; interest rate … Zinssatz; to cut interest rate … Zinsen senken; to command a sum … über ein Kapital verfügen]

2.2 6000€ are banked for 5 years, 6 months and 17 days with an interest rate of 3% p.a. Calculate the final value using **a.** theoretical, **b.** practial return and compare the results.
[to bank money … Geld bei einer Bank anlegen; final value … Endwert; theoretical/practical return … theoretische/praktische Verzinsung]

2.3 For a capital of 9800€ a bank offers to refund a final value of 10428€ after 5 years.

a. Compute the corresponding interest rate.

b. Compute the capital necessary to get the final value stated above after 4 years, assuming the same interest rate as before.
[to refund … zurückzahlen]

2.4 A savings account is opened on January, 13th, 2014 at 2.5% interest p.a. Charge interest for year 2014 (practical return, 360 days/year) and compute the available balances at the end of year 2014 after deduction of capital yields tax.

date	deposit/ payout	available balances
13.01.2014	1200	1200
04.05.2014	2300	
30.08.2014	-1000	
30.11.2014	500	

[savings account … Sparkonto; at x% interest … zu einem Zinsatz von x%; to charge interest … Zinsen berechnen; practical return … praktische Verzinsung; available balance … Guthaben; deduction … Abzug; capital yields tax … Kapitalertragssteuer; deposit … Einzahlung; payout … Auszahlung]

2.5 Mr. Jones has a principal sum of 5500€ at his disposal and wants to invest it profitably. He compares the proposals of two banks:
Bank 1 offers a nominal interest rate of 4% p.a. with monthly capitalization.
Bank 2 offers a quarterly period interest rate of 1.25% p.q.

a. Compute the effective interest rate for both offers and decide, which would be more profitable.

b. Compute the final value after 5 years for your chosen offer.
[principal sum … Anfangskapital; to have sth. at his/her disposal … etw. zur Verfügung haben; profitably … gewinnbringend; proposal, offer … Angebot; nomial interest rate … Nominalzinssatz; capitalization … Kapitalisierung; quarterly period interest rate … Quartalszinssatz; to omit … nicht berücksichtigen; capital yields tax … Kapitalertragssteuer; final value … Endwert]

2.6 At the beginning of each month, Stephen pays 250€ into an account with an interest rate of 2.25% p.a.

a. Calculate the final value after six years.

b. Calculate the sum Stephen would have to pay into a savings account with interest rate 3% p.a., to have the same final value available at the end of the sixth year as with his monthly payments.
[to pay into an account … auf ein Sparbuch/Sparkonto einzahlen; savings account … Sparbuch]

Autorin: Bettina Ponleitner