

Worksheet

Exam-type questions

1. Donald invests R5 000 in a savings account for 2 years. The investment earns 10% p.a. compounded quarterly.
 - 1.1 What is the quarterly interest rate for his investment?
 - 1.2 Calculate the amount in Donald's savings account at the end of 2 years (to the nearest rand).
2. A company bought a new printing machine at the beginning of 2015 for R24 000. It depreciates by 11,5% on a straight line basis.
 - 2.1 Calculate the book value of the machine at the beginning of 2019.
 - 2.2 In how many years would the machine have a book value of zero (to the nearest year)?
 - 2.3 If depreciation was calculated on a reducing balance with the same rate, calculate how many years it would take to reach the same book value (calculated in 2.1).
3. Mr Salie buys a car for R255 000. It depreciates in value on a reducing balance by 12,5% p.a.
 - 3.1 Calculate the value of the car after 3 years (to the nearest rand).
 - 3.2 After how many years will Mr Salie's car be worth R100 000?
4. Reece buys a car costing R192 000 and takes out a 5-year loan with interest charged at 12% p.a. compounded monthly.
 - 4.1 Calculate Reece's monthly instalments.
 - 4.2 After he has paid 45 instalments, he decides to settle the balance on the car loan. Calculate the lump sum he needs to pay after he has paid his 45th instalment.
5. A company buys a vehicle for R450 000.
 - 5.1 Calculate the annual rate of depreciation on a reducing balance if the vehicle is valued at R243 736,90 after 4 years.
 - 5.2 If the average rate of the price increase is 8,1% p.a., calculate the expected cost of a new vehicle in 4 years' time.
 - 5.3 The vehicle that cost R450 000 needs to be replaced in 4 years' time. The old vehicle will be traded in and a sinking fund is set up to cover the replacement cost of the vehicle. The first payment will be made at the end of the 13th month and the last payment will be made at the end of the 48th month. The sinking fund earns interest at 6.2% p.a. compounded monthly. Calculate the monthly payment to the fund.