

JUNE EXAM QUESTIONS

12 JUNE 2014



Lesson Description

In this lesson we revise:

- Finance calculations



Test Yourself

In order to buy a Christmas present for his girlfriend, James takes a loan of R500,00 from an organization advertising in a local newspaper. The name of the organization is called “Sharks that Bite”. This organization charges 15% interest per month and so James has to pay back R130,00 every month.

The table below shows how James will need to repay his loan. Unfortunately, there are some figures missing.

MONTH	OPENING BALANCE	INTEREST	BALANCE WITH INTEREST	PAYMENT	CLOSING BALANCE
December	R500,00	R75,00	R575,00	R130,00	R445,00
January	R445,00	R66,75	R511,00	A	R381,75
February	B	R57,26	R439,01	R130,00	B
March	R309,01	C	R355,36	R130,00	R225,36
April	R225,36	R33,80	D	R130,00	E
May	F	G	R148,54	H	R0,00
TOTAL INTEREST PAID		I	TOTAL PAYMENT	J	

- The value for A is:
 - A R66,75
 - B R130,00
 - C R11,00
- The value for B is:
 - A R130,00
 - B R381,75
 - C R557,26
- The value for C is:
 - A R130,00
 - B R46,35
 - C R55,36

notes for...

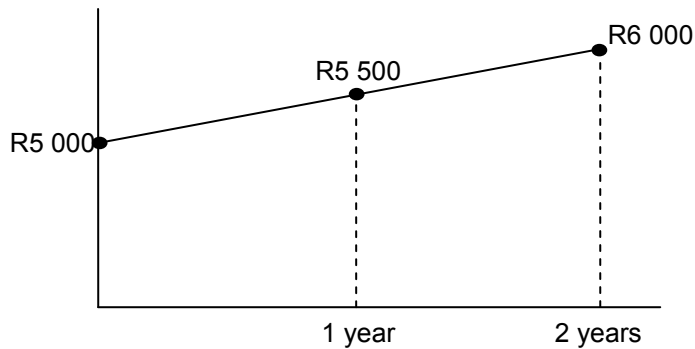
4. The value for D is:
A R163,80
B R259,16
C R191,56
5. The value for E is:
A R95,36
B R96,20
C R129,16
6. The value for F is:
A R95,36
B R96,20
C R129,16
7. The value for G is:
A R14,30
B R14,43
C R19,37
8. The value for H is:
A R148,54
B R130,00
C R0,00
9. The value for I is:
A R298,53
B R279,16
C R232,81
10. The value for J is:
A R780,00
B R520,00
C R798,54



Improve your Skills

Question 1

Consider the following graph which shows an interest problem.



In each of the following, just write down the question number and the correct corresponding letter

1.1 Which formula should one use when working with this problem? (2)

Formula 1 - $A = P(1 + i)^n$

Formula 2 - $A = P(1 + i.n)$

Formula 3 - $Interest = P \times n \times i$

- A: Formula 1
- B: Formula 2
- C: Formula 3
- D: Could use 2 and 3

1.2 The value for A is: (2)

- A: R 5 000
- B: R 5 500
- C: R 6 000
- D: R 500

1.3 The value for P is: (2)

- A: R 5 000
- B: R 5 500
- C: R 6 000
- D: R 500

1.4 The interest earned is: (2)

- A: R 500 a year
- B: R 1 000 a year
- C: 20% a year
- D: 10 % a year

1.5 The interest rate is:

(2)

- A: R 500 a year
- B: R 1 000 a year
- C: 20% a year
- D: 10 % a year

Question 2

Complete the following table:

Day	Amount owing at the beginning of the day	Transaction	Balance after transaction	Interest at 0,021% per day	Balance owing at the end of the day
1	R 54.70	Deposit R2500			
2		Withdraw R500			

Question 3

According to the website <http://www.businessesforsale.co.za> ; there is a hotel in Port Elizabeth for sale at a price of R 4 750 000,00. According to the agent, one can make an average monthly profit of R45 000,00.



- 3.1 With the use of the table below, determine if someone wanting to buy this hotel could afford the monthly repayments (from the profit made from the hotel) on a bond if the bond was registered for the full amount of R4 750 000,00 and if the bond was taken at 8% interest over a period of 25 years.

Loan Period	Interest Rate						
	8%	9%	10%	10,25%	10,5%	10,75%	13%
5 years	20,28	20,76	21,25	21,37	21,49	21,62	22,75
15 years	9,56	10,14	10,75	10,9	11,05	11,21	12,65
20 years	8,36	9	9,65	9,82	9,98	10,15	11,71
25 years	7,72	8,39	9,09	9,26	9,44	9,62	11,28

- 3.2 If someone bought the hotel, what would they have paid for the hotel over the full 25 year period, using 8%.
- 3.3 Were the economy of South Africa to change, how much would the new owners pay on the bond every month if the interest rate were to increase to 13%, still over the 25 year period?

- 3.4 Calculate the total cost of the hotel if the owners are wanting to pay the hotel over 20 years, but the interest rates fluctuate as follows:

Months	Interest Rate
1 - 26	8%
27 – 67	9%
68 – 145	13%
146 – 201	10,25%
Remainder of loan period	10%

Question 4

At the end of a year, Mrs Peter gets a salary increase of 5% on her net salary of R10 458 a month. The next year the inflation rate rises by 7,3%. Mrs. Peter is really upset until her boss tells her that she will be getting an increase of R679,77 a month. Her money problems are over...well, that's what Mrs. Peter thinks anyway.

With the use of calculations, show if Mrs. Peter is in a better financial position after her increase.