



Dr. Bbosa Science

This document is sponsored by
The Science Foundation College Kiwanga- Namanve
Uganda East Africa
Senior one to senior six
+256 778 633 682, 753 802709
Based on, best for sciences



Simple interest

There is a formula for simple interest

$$I = PRT$$

where

- I = interest
- P = amount borrowed (called "Principal")
- R = interest rate
- T = time

Interest is the amount charged on the money (Principal) borrowed from the bank in a specified period of time, T.

Example 1

A trader put sh. 50,000 in the bank for one year. If the interest Rate was 30%, how much money did he get as interest?

$$\begin{aligned} \text{Interest, } I &= PRT \\ &= 50000 \times \frac{30}{100} \times 1 = 15,000/ = \end{aligned}$$

Example 2

John banked Shs. 150,000 on his account for 2 years at the rate of 5% simple interest. How much interest did he earn?

$$\begin{aligned} \text{Interest} &= PRT \\ &= 150000 \times \frac{5}{100} \times 2 \\ &= 15,000 \end{aligned}$$

Exercise

1. Kerto borrowed sh. 50,000 from a bank which charges a simple interest of 18 per annum. How much interest will Kerto pay after 2 years?
2. Opio put Shs. 60,000 in the bank. If the interest rate was 8% per year, how much interest did he get after 6 months?
3. Mukasa put Shs. 80,000 in the bank. If the interest rate was 10%, how much interest did he get after 9 months?
4. Musa deposited Sh. 60,000/= in Crane Bank which offers an interest of 12% per year. How much interest did Musa receive from the bank after 9 months?
5. Amooti deposited Shs 15,000 in a bank, which offers interest rate of $2\frac{1}{2}$ % per year for one year. Find the interest.
6. Kintu put Shs 40,000 in Stanbic Bank. If the interest rate was 10% per year, how much simple interest did he get after 9 months?

7. Odama deposited Sh 120,000 in bank, which gives a simple interest rate of 4% per year. Find his interest after 3 months.
8. Mary borrowed sh 100,000/= from her club to be returned in 3 months at a simple interest rate of 5% per month. Find out the total amount of money Mary returned to the club after 3 months.
9. Olinde lends sh 300,000 to Mugisha at an interest rate of 5% per year for 4 months
- Find the interest gained by Olinde.
 - How much money altogether did Mugisha pay back?

10. (a) Okello's wage was increased by 10% to Shs 77,000 per month. Find his old salary.

(b) If his new wage of Shs 77,000 was decreased by 5%, find his final wage.

11. A farmer banked Shs. 3 million in Nile bank. If he banked 20,000-shilling notes, how many notes did he bank?

12. A bank gives a simple interest rate of 12% per annum. What will be the interest on sh.400,000 banked for 9 months?

13. A trader got a simple interest of shs 18,000 after depositing shs90,000 in a bank at an interest of 10% per annum. For, how long was his money in the bank?

14. David got a loan of shs. 500,000 from the bank at a simple interest rate of 20% per annum. What was the interest on the loan after a period of 9 months?

15. A farmer banked shs 26,000 for 4 months at a simple interest rate of 8% per year, find his interest.
16. David deposited money in a bank which offer a simple interest rate of $2\frac{1}{2}\%$ per year. After 9 months, his account had an amount of 163000. Calculate the money David deposited in the bank. (5marks)
17. Hajati bought 120 shares from a village SACCO at a simple interest rate of 30% per year. Each share cost sh. 3, 000.
- (a) Find her total interest after $3\frac{1}{2}$ years. (03marks0
- (b) Calculate the total amount of money Hajati has in the SACCO after $3\frac{1}{2}$ years

Suggested answers

1. Kerto borrowed sh. 50,000 from a bank which charges a simple interest of 18 per annum. How much interest will Kerto pay after 2 years?

$$\begin{aligned} I &= PRT \\ &= 50000 \times \frac{18}{100} \times 2 = 18,000 \neq \end{aligned}$$

2. Opio put Shs. 60,000 in the bank. If the interest rate was 8% per year, how much interest did he get after 6 months?

$$\begin{aligned} I &= PRT \\ &= 60000 \times \frac{8}{100} \times \frac{6}{12} = \text{shs } 2,400 \end{aligned}$$

3. Mukasa put Shs. 80,000 in the bank. If the interest rate was 10%, how much interest did he get after 9 months?

$$\text{Interest, } I = PRT = 80000 \times \frac{10}{100} \times \frac{9}{12} = 6000 \neq$$

4. Musa deposited Sh. 60,000/= in Crane Bank which offers an interest of 12% per year. How much interest did Musa receive from the bank after 9 months?

$$\begin{aligned} \text{From } I &= PRT \\ \text{Interest, } I &= 60000 \times \frac{12}{100} \times \frac{9}{12} = \text{shs } 5400 \end{aligned}$$

5. Amooti deposited Shs 15,000 in a bank, which offers interest rate of 2½ % per year for one year. Find the interest.

$$\begin{aligned} I &= PRT \\ &= 15000 \times \frac{5}{200} \times 1 = \text{shs. } 375 \end{aligned}$$

6. Kintu put Shs 40,000 in Stanbic Bank. If the interest rate was 10% per year, how much simple

interest did he get after 9 months?

$$I = PRT = 40000 \times \frac{10}{100} \times \frac{9}{12} = \text{shs } 3000$$

7. Odama deposited Sh 120,000 in bank, which gives a simple interest rate of 4% per year. Find his interest after 3 months.

$$\begin{aligned} I &= PRT \\ &= 120,000 \times \frac{4}{100} \times \frac{3}{12} = \text{shs } 1200 \end{aligned}$$

8. Mary borrowed sh 100,000/= from her club to be returned in 3 months at a simple interest rate of 5% per month. Find out the total amount of money Mary returned to the club after 3 months.

$$\begin{aligned} \text{Money returned} &= P + I \\ &= P + PRT \\ &= 100000 + 100000 \times \frac{5}{100} \times 3 \\ &= 100000 + 15000 \\ &= 115000/= \end{aligned}$$

9. Olinde lends sh 300,000 to Mugisha at an interest rate of 5% per year for 4 months

c) Find the interest gained by Olinde.

$$\begin{aligned} I &= PRT \\ &= 300000 \times \frac{5}{100} \times \frac{4}{12} = 5000 \end{aligned}$$

d) How much money altogether did Mugisha pay back?

$$\begin{aligned} \text{Money paid back} &= \text{principal} + \text{interest} \\ &= 300000 + 5000 \\ &= 305,000 \end{aligned}$$

10. (a) Okello's wage was increased by 10% to Shs 77,000 per month. Find his old salary.

Let the old wage be x

$(100\% + 10\%)$ of $x = 77000$

$$\frac{110}{100}x = 77000$$

$$x = 77000 \times \frac{100}{110} = 70,000$$

therefore, Okello's old salary was 70,000/=

(b) If his new wage of Shs 77,000 was decreased by 5%, find his final wage.

His new salary = $(100\% - 5\%)$ of 77000

$$= \frac{95}{100} \times 77000 = 73150$$

Okello's new salary will be sh. 73150

11. A farmer banked Shs. 3 million in Nile bank. If he banked 20,000-shilling notes, how many notes did he bank?

$$\text{Number of notes} = \frac{\text{total amount}}{\text{amount per note}} = \frac{3000000}{20000} = 150$$

12. A bank gives a simple interest rate of 12% per annum. What will be the interest on sh.400,000 banked for 9 months?

$$I = P \times R \times T = 400000 \times \frac{12}{100} \times \frac{9}{12} = \text{shs. } 36,000$$

13. A trader got a simple interest of shs 18,000 after depositing shs90,000 in a bank at an interest of 10% per annum. For, how long was his money in the bank?

$$I = P \times R \times T$$

$$90000 \times \frac{10}{100} \times T = 18000$$

$$T = 2 \text{ years}$$

14. David got a loan of shs. 500,000 from the bank at a simple interest rate of 20% per annum. What was the interest on the loan after a period of 9 months?

$$I = P \times R \times T$$

$$P = 500000$$

$$R = 20\%$$

$$T = 9\text{months} = \frac{9}{12}\text{year}$$

$$I = 500000 \times \frac{9}{12} \times \frac{20}{100} = 75,000$$

15. A farmer banked shs 26,000 for 4 months at a simple interest rate of 8% per year, find his interest.

$$\text{Interest} = P \times T \times R = 26000 \times \frac{8}{100} \times \frac{4}{12} = 3360$$

16. David deposited money in a bank which offer a simple interest rate of $2\frac{1}{2}\%$ per year. After 9 months, his account had an amount of 163000. Calculate the money David deposited in the bank. (5marks)

Let the principle be P

$$\text{Principal (P) + interest (P X R X T) = 163000}$$

$$P + P \times \frac{5}{200} \times \frac{9}{12} = 163000$$

$$P = 160000$$

$$\text{Money deposited in the bank} = 160000$$

17. Hajati bought 120 shares from a village SACCO at a simple interest rate of 30% per year. Each share cost sh. 3,000.

(c) Find her total interest after $3\frac{1}{2}$ years. (03marks)

$$\text{Total money for the shares} = 120 \times 3000 = 360000 \text{ /-}$$

$$I = PRT = 360000 \times \frac{30}{100} \times \frac{7}{2} = 378000 \text{ /-}$$

(d) Calculate the total amount of money Hajati has in the SACCO after $3\frac{1}{2}$ years

$$\text{Money in the SACCO} = P + I$$

$$= 360000 + 378000$$

$$= 738000$$

Sponsored by The Science Foundation College +256 753 802709



Powered by: www.schoolporto.com
System developed by -- lule -- 0752697211, info@schoolporto.com