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?

Interest, I = PRT

$$= 50000 \text{ x } \frac{30}{100} \text{ x } 1 = \ 15{,}000/=$$

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?

Interest = PRT

$$= 150000\ x\ \frac{5}{100}\ x\ 2$$

$$= 15{,}000$$

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 2½ % 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
   a) Find the interest gained by Olinde.

   b) 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 ½ % 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 ½ years. (03marks0

    (b) Calculate the total amount of money Hajati has in the SACCO after 3 ½ 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?

   I = PRT

   = 50000 x $\frac{18}{100}$ x 2 = 18,000 ≠

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?

   I = PRT

   = 60000 x $\frac{8}{100}$ x $\frac{6}{12}$ = shs 2,400

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

   Interest, I = PRT = 80000 x $\frac{10}{100}$ x $\frac{9}{12}$ = 6000 /=

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?

   From I = PRT

   Interest, I = 60000 x $\frac{12}{100}$ x $\frac{9}{12}$ = shs 5400

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

   I = PRT

   = 15000 x $\frac{5}{200}$ x 1 = shs. 375

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 x $\frac{10}{100}$ x $\frac{9}{12}$ $= shs\ 3000$

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

   I = PRT

   = $120{,}000\ x\ \frac{4}{100}\ x\ \frac{3}{12} =$ shs 1200

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.

   Money returned = P + I

   = P + PRT

   = 100000 + 100000 x $\frac{5}{100}$ $x\ 3$

   = 100000 + 15000

   = 115000/=

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.

   I = PRT

   = 300000 x $\frac{5}{100}$ x $\frac{4}{12}$ = 5000

   d) How much money altogether did Mugisha pay back?

   Money paid back = principal + interest

   = 300000 + 5000

   = 305,000

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

$\frac{110}{100}x = 7700$

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

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

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

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?

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

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 x R x T = 400000 x $\frac{12}{100}\ x\ \frac{9}{12}$ = 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 x R x T

90000 x $\frac{10}{100}\ xT$ = 18000

T = 2 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 x R x T

P = 500000

R = 20%

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

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

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

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

16. David deposited money in a bank which offer a simple interest rate of 2 ½ % 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

Principal (P) + interest (P X R X T) = 163000

P + P x $\frac{5}{200}\ x\ \frac{9}{12}$ = 16300

P = 16000

Money deposited in the bank = 16000

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 ½ years. (03marks0

Total money for the shares = 120 x 3000 = 360000 /=

I = PRT = 360000 x $\frac{30}{100}\ x\ \frac{7}{2}$ = 378000 /=

(d) Calculate the total amount of money Hajati has in the SACCO after 3 ½ years

Money in the SACCO = P + I

= 360000 + 378000

= 738000