3055 BA SANGAM COLLEGE
PH: 6674003/9264117   E-mail: basangam@connect.com.fj

WORKSHEET 22

SCHOOL: BA SANGAM COLLEGE   **YEAR: 10**
SUBJECT: MATHEMATICS   **NAMEOF STUDENT:** _____

STRAND	5 - MEASUREMENT
SUB-STRAND	5.3 Simple Interest
LEARNING OUTCOME	**To** Calculate simple interest

Simple Interest

Saving money is a lot better than borrowing money. When money is saved and deposited, interest is paid out.
Simple interest is interest that remains the same every year and can be calculated using the formula

$$SI = \frac{P \times R \times T}{100}$$

where: **SI = Simple interest**
P = Principal amount
R = Rate (%)
T = Time (Year/annum)

Example 1

Mr. Hiralal deposits $10000 in a bank for 3 years. The bank pays him 5% interest per annum. Calculate the total amount that Mr. Hiralal has in his account after 3 years.

Solution
Calculate the interest in dollars.

$\frac{5}{100} x \$ 10000 = \$500$ Interest for one year.

OR

$$SI = \frac{P \times R \times t}{100} \quad P = \$10000. \quad R = 5\%. \quad T = 3$$
$$= \frac{10000 \times 5 \times 3}{100}$$
$$SI = \$1500$$

Total amount = $1500 + 10000 = $11500

Interest for 3 years.

$500 x 3 = $1500   (interest remains the same for the 3 years)

Total amount after 3 years = principal amount + interest for 3 years.

$10000 + $1500 = **$11500**

Example 2

Sunil wishes to buy a car worth $12000. He applies for a loan from a local bank which is going to charge him 6% interest per annum. If Sunil takes 3 years to finish his loan what is the total amount that he will have to pay?

Solution
Calculate the interest in dollars.

$\frac{6}{100} \times \$12000 = \$720$ Interest for one year.

Interest for 3 years.

$720 x 3 = $2160   (interest remains the same for the 3 years)

Total amount after 3 years = principal amount + interest for 3 years.

$12000 + $2160 = **$14160**

Example 3

Villiame puts $2000 in a two-year term deposit that earns simple interest. When the account matures, he has $2200. What interest rate was

charged?

Solution

(i) Find the interest
$2200 - $2000 = $200

(II) find interest per year
$200 ÷ 2 = $100

(ii) Find the rate
$2000 × x = $100

(iv) convert to a percentage
0.05 × 100 = **5%**

$$2000x = 100$$
$$x = 100/2000$$
$$x = 0.05$$

Activity

1. If $200 is deposited in a savings account that earns 7.5% simple interest, how much money will be earned after. **(4 marks)**

    (a) 1 year   (b) 3 years   (c) 15 years

2. Inoke deposits $1500 in a savings account that earns 5% simple interest. How much money would he have if he withdrew after? **(3 marks)**

    (a) 1 year.   (b) 6 months.   (c) 9 months

3. Vilimaina invests $2000 in a term deposit account for 3 years. After 3 years she has a total of $2388. What interest rate was paid on the account? **(2 mark)**

4. If $1000 is put on a term deposit that earns 8% simple interest, how many years will it take the balance to reach $2000? **(2 mark)**