JAFFNA HINDU COLLEGE

Risk Holiday Self - Education Worksheet (2) – 2020

Grade – 11 | Mathematics

Name/Index No : …… Mr.S.Mayooran, NDT(Maths)

INSTRUCTIONS :

- Answer all the questions.
- Answer the questions on answer sheets only.
- Read the respective lesson units thoroughly and comprehend before you attempt answering the questions.
- File the completed answer and hand over to the class teacher when the school reopens.

Hire Purchase

[Calculating interest on reducing balance]

Example:1

1. A refrigerator of worth Rs.80,000 can be bought under hire purchase by paying Rs.20,000 as down payment and the balance in 20 equal installments at annual rate of interest 12%. Calculate the amount of an installment.

I. What is the loan amount

Rs.80,000 – Rs.20,000 = Rs.60,000

II. Find the monthly loan amount

$\frac{60,000}{20}$ = Rs.3000

III. Calculate the interest per month unit

$\frac{12}{100} * \frac{1}{12} * 3000$ = Rs.30

IV. Find the number of months unit

$\frac{20 * 21}{2}$ = 210

V. Find the total interest

30 * 210 = Rs.6300

VI. What is the total amount should be paid (Total installments)

60,000 + 6,300 = Rs.66,300

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Exercises

1. 1.A computer valued at Rs.75,000 can be obtained at an annual interest of 24% to be paid back in 10 equal installments. Initially Rs.25,000 should be paid. Calculate the monthly installments.

2. 2.A person can be obtained his 10 months salary as loan at annual rate of interest 18%, to be paid in 60 equal installments.
    a. What is the monthly loan amount
    b. Find the interest per month unit
    c. Find the number of month units
    d. Calculate the total interest
    e. Calculate the amount of an installment

3. A television valued Rs.120,000 can be bought on hire purchase by making 40% of its value as initial payment and balance in equal monthly installments at annual rate 6% within 2 years.
    a. What is the down payment
    b. Find the monthly loan amount
    c. Find the interest per month unit
    d. Find the number of month units
    e. Calculate the amount of an installment

4. Mr.Nishanthan obtains a loan of Rs.396,000 at an annual interest rate of 24%. It should be paid in 3 years as equal monthly installments with interest. Calculate the amount of an installment.

5. A furniture set costs Rs.120,000. It can be bought on hire purchase by making an initial payment of Rs.40,000 and the balance in 16 equal monthly installments at annual rate of interest 18% . Calculate the amount of an installment.

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Example :2

A television costs Rs.60,000 bought under hire purchase by making an initial payment of Rs.12,000 and the balance in 24 equal monthly installments of each Rs.2250.

I. What is the loan amount

Rs.60,000 – Rs.12,000 = Rs.48,000

II. Find the monthly loan amount

$\frac{48,000}{24}$ = Rs.2000

III. Find the total amount should be paid

2250 * 24 = Rs.54,000

IV. What is the total interest

Rs54,000 - Rs48,000 = Rs.6,000

V. Find the number of months unit

$\frac{24 * 25}{2}$ = 300

VI. Calculate the interest per month unit

$\frac{6000}{300}$ = Rs.30

VII. Calculate the annual rate of interest

$\frac{r}{100} * \frac{1}{12} * 2000 = 20$

$r = \frac{20 * 12 * 100}{2000}$

Excercise

1. A mobile phone valued Rs.15,500 can be bought on hire purchase by making Rs.3500 as initial payment and the balance in 6 equal monthly installments of each Rs.2140 calculate annual rate of interest.

2. A television costs Rs.36,000 can be bought by making down payment of Rs.15,000 and the balance in 14 equal installments of each Rs.1650.Calculate the annual rate of interest charged.

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Compound Interest

Example 01 :

A Person deposits Rs.50,000 at 10% compound interest. Find the total amount in his account after two years.

Method - I

Interest for first year = $\frac{10}{100} \times 50{,}000$

= Rs. 50,000

Second Your Capital = 50,000 + 50,000

= Rs.55,000

Interest for second year = $\frac{10}{100} \times 55{,}000$

= Rs.5500

Total amount after

Second Year = 55,000 + 5,500

= 60,500

Method - II

Total amount = $\frac{110}{100} \times \frac{110}{100} \times 50{,}000$

= 60,500

Total Amount (P)

$P(1+\frac{r}{100})^n$

P – Copited

r – annual rute of interest

n – period

Exercise :

01. A Person borrowed Rs.40,000 from a financial institution at 8% annal interest compounded. find the total amount he has to pay to to settle the loan after two year.
02. Raja borrowed Rs.80,000 at 25% compound interest. find the total amount he has to pay to settle the load after two years.

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03. Ravi loaned Rs.60,000 at 15% annual interst compounded. what is the total amount should paid to release from the load after three years.
04. A Bank calculated interest for every six months at annual rate 20%. Calculate the total amount after one year, If he deposited Rs.30,000.
05. A Person borrowed a certain amount from a bank at 10% compound interest. He paid Rs.48,400 after two years and released from the load. Calculate the amount of Load.

Share Market

Annual Dividend (Income) = Annual dividends Per Share X Number of Shares.

Examples:

01. A Person bought 6000 shares in a company which pays annual dividend of Rs.3 per share. Calculate his annual income.
02. A person bought some shares in a company which pays annual dividend of Rs.5 per share. After one Year he gained Rs.10,000 as annual income. Find the number of shares he bought.
03. Ram bought 8000 shares in a company and gained Rs.20,000 as annual income after one Year. Calculate the annual dividend per share.

Answers :

01. Income = 3 x 6000

= 18000

02. Number of shares. = $\frac{10000}{5}$

= 20,000

03. Annual dividend from a share = $\frac{20000}{8000}$

= Rs.2.50

Annual dividend from a share	Number of shares.	Annual dividend
Rs.3	2500	……..
Rs.4.50	12000	……..
……	4000	Rs 28,000
……	16000	Rs 56,000
Rs.6	……..	Rs 27,000
Rs.5.50	……..	Rs 33,000

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Ownership in a Company

Example :

A Company reised its capital Rs.8000000, from 80,000 shares of each Rs.100. Ashvikan bought 16,000 shares in this company.

1. Express the number of shares Ashvikan bought.
   a. As a fraction of whole shares.
   $\frac{16000}{80000} = \frac{1}{5}$
   b. As a percentage of whole shares.
   $\frac{1}{5} \times 100 = 20\%$
2. What is the investment of Ashvikan.

   16,000 X 10 = 1600000

Exercise :

Company A released 20,000 shares of each Rs.50. Thushi bought 2500 shares.

1. Express number of Thusi's shares as a fraction of whole shares.
2. Express the number of Thushi's shares as a percentage.
3. find the investment of Thusi.

Example :

Amal invested Rs.120,000 to buy shares in a company at the market value Rs.40 per shares. Company pays annual dividend of Rs.6 per share.

1. Find the number of shares Annual bought.
   $\frac{120000}{40} = 3000$
2. Find the Annual dividend.
   Rs.6 X 3000 = Rs.18000
3. Express his income as percentage of investment.
   $\frac{18000}{120000} \times 100 = 15\%$

Excercises :

01. Shankar invest Rs.20000 to buy shares at market value Rs.25 each. Company pays Rs.2.50 dividend per shares.
    a. Find the number of shares shankar bought.
    b. Calculate the annual dividend.
    c. Express the annual divided as percentage of investment.

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02. A Person invest a certain amount to buy Rs.60 shares in a company, which pays divided of Rs.5 per share. He gained Rs.30,000 as One year income.
    a. Find the number of shares bought.
    b. Calculate the investment.

03. Hari invested Rs.96,000 to buy shares in a company at market price Rs.30 per shares. He gained Rs.14,400 income after the one year. Find the annual dividend per share.

04. Kavin invested Rs.160,000 in company 0 to buy shares. company pays Rs.3.50 dividend per shares. He gained Rs.28,000 as income after one year.
    a. Find the number of shares.
    b. findthe market value of a share.

Capital Gain.

Capital Gain = Selling price of shares – Investment (Buying Price)

Examples :

01) Ahilan bought 4000 shares in a company at market value Rs.30 per shares, then he sold all the shares at Rs.36 each.
    a. Find the investment.
        30 X 4000 = 120,000
    b. Find the income from selling shares.
        36 x 4000 = 144,000
    c. Find the capital gain.

        Method – I
        = 144,000 – 140,000
        = 24,000

        Method – II
        Capital gain from a share = 36 – 30 = Rs.6
        Capital gain = 6 X 4000 = 24,000
    d. Express the percentage of capital gain.
        Method – I
        $\frac{24000}{120000} \times 100 = 20\%$

        Method – II
        $\frac{6}{30} \times 100 = 20\%$

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Excercises :

01. A Person invested Rs.80,000vto buy shares in a company at market value Rs 50 Per shere. Company Pays Rs 3 dividend per share. At the end of one Year he sold all the shares ar Rs. 54 each.
    a. Find the number of shares.
    b. Find the annual income.
    c. What is the capital gain.
    d. Calculate the percentage of Capital gain.
02. A Person spent a part if Rs. 75000 he possessed, to buy shares of Rs. 100 in a company paying a dividend of Rs.10 per shares and the balance to buy Rs.50 shares in another company. Which pays dividend of Rs. 6 per shares. If the total annual income he obtained was Rs. 8200. find the investment in each company.
    [Hind – take X as the investment in first company]

03. Mr.Kabi invest Rs 6000 in a company to buy shares at the market value rs 20 each.
    a. If he recived Rs 1200 annual divided after one year, find the annual dividend per shares.
    b. He sold some shares at Rs 3600, from this he faced a capital loss of Rs.400. find the number of shares he sold.
04. Me.silva invested Rs 270000 to buy shares in a company at market value Rs.9 company pays Rs.2 dividend per share.
    a. Find the annual dividend
    b. After one year he sold all the shares at Rs.10.50 per shares. Calculate the percentage of capital gain.

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