

FINANCIAL MATHEMATICS
Fin 111

ملف مساند مهم

- اعداد : إدارة المناهج
- ارفاق قسم المواد التجارية

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KINGDOM OF BAHRAIN
Ministry of Education



مَمْلَكَةُ الْبَحْرَيْنِ
وَزَارَةُ التَّرْبِيَةِ وَالتَّعْلِيمِ

اللقاء التربوي مع معلمي مقرر الرياضة المالية مال 111

الفصل الدراسي الأول
2023 / 2022



FINANCIAL MATHEMATICS
Fin 111

إدارة المناهج - نوفمبر 2022م

Week 1 Lesson 1. 1,2,3

Review Numbers

Unit 1 : Review Numbers

Lesson 1.1 : Write Whole Number

Lesson 1.2 : Place Value and Number System

Lesson 1.3 : Round Whole Number



15-27	Lesson 1.1,2,3	Review Numbers (Write, Place , Round)
28 -32	Lesson 1.4	Money Currency System
39-44	Lesson 2.1 Lesson 2.2	System of Payment Payroll by Hour & Week
45-49	Lesson 2.3 Lesson 2.4	Payroll by Piece & Rate Payroll by Commission & Bonus
50-54	Lesson 2.5	Deductions
65-72	Lesson 3.1	Trade Discount
73-76	Lesson 3.2	Cash Discount
77-84	Lesson 3.3 Lesson 3.4	Value Added Tax (VAT) Tariff in the Kingdom of Bahrain
85-96	Lesson 3.5,6 Lesson 3.7	Pricing goods Based on (Cost - Selling) Mark -Down
105-114	Lesson 4.1 Lesson 4.2 Lesson 4.3	The Concept of Simple Interest Formula of Simple Interest & amount Simple Interest (months - years - months & years
115-119	Lesson 4.3 Lesson 4.4	Simple Interest (days- Counting Days) Exact and Trade Interest
120-125	Lesson 4.5	Finding Factors of Simple Interest

Learning Objective

By the end of this unit, the student should be able to:

- ▶ write the whole and decimal numbers.
- ▶ place value and our number system.
- ▶ round the whole numbers.
- ▶ money and currency exchange

1



1.1 Write the Whole Numbers



Read Whole Numbers:

1	One	11	eleven	10	ten	21	twenty-one
2	Two	12	twelve	20	twenty	22	twenty- two
3	Three	13	thirteen	30	thirty	33	thirty-three
4	Four	14	fourteen	40	forty	44	forty-four
5	Five	15	fifteen	50	fifty	55	fifty-five
6	Six	16	sixteen	60	sixty	66	sixty-six
7	Seven	17	seventeen	70	seventy	77	seventy-seven
8	Eight	18	eighteen	80	eighty	88	eighty- eight
9	Nine	19	nineteen	90	ninety	99	ninety- nine
100		one-hundred					
2,000		two-thousand					
3000,000		three-million					
4000,000,000		four-billion					
5000,000,000,000		five-trillion					

Read decimal numbers:

0.1	Tenths
0.01	Hundredths
0.001	Thousandths
0.0001	Ten -thousandths
0.00001	Hundred-thousandths
0.000001	Millionths
0.0000001	Ten-Millionths
0.00000001	Hundred- Millionths



Example 1-1-1:

► Write the number **1,890,512.627** in letters:

Millions	Thousands	Units	Point	Tenths	Hundredths	Thousandths						
		1	8	9	0	5	1	2	.	6	2	7

One million, eight hundred ninety thousand, five hundred **twelve** and six hundred twenty-seven thousandths.



Example 1-1-2:

► Write the following numbers in letters:

a- 47,203 = Forty-seven thousand, two hundred three.

b- 5,821,496 = Five million, eight hundred twenty-one thousand, four hundred ninety-six.

c- 0.375 = Three hundred seventy-five thousandths.

d- 4.6 = Four **and** six-tenths.

e- \$ 234.75 = Two hundred thirty-four dollar and seventy-five **cents**.

f- BD 20.825 = Twenty **dinar** and eight hundred twenty -five **fil**s.

1.2 Place Value and Number System

Units	One	1
	Ten	10
	Hundred	100
Thousands	Thousand	1,000
	Ten thousand	10,000
	Hundred thousand	100,000
Millions	Million	1,000,000
	Ten Million	10,000,000
	Hundred Million	100,000,000
Billions	Billion	1,000,000,000
	Ten Billion	10,000,000,000
	Hundred Billion	100,000,000,000
Trillions	Trillion	1,000,000,000,000
	Ten Trillion	10,000,000,000,000
	Hundred Trillion	100,000,000,000,000

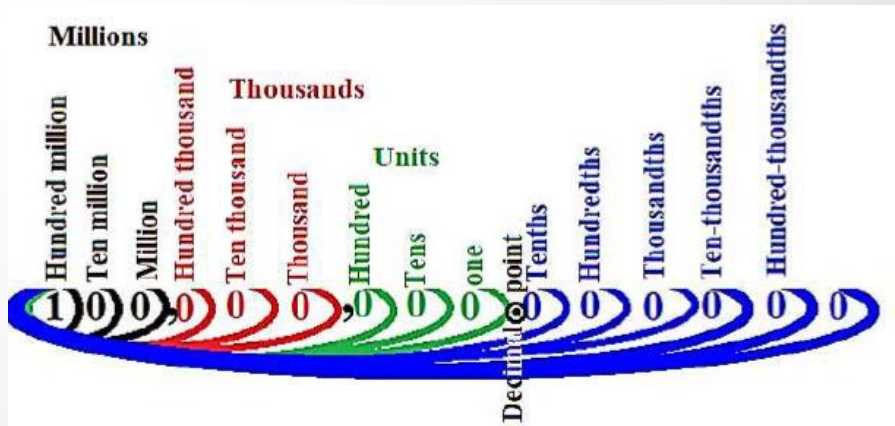


Example 1-2-1:

- Find the place value of the number 381,345,287,369,021.

Trillions			Billions			Millions			Thousands			Units		
Hundred Trillion	Ten Trillion	Trillion	Hundred Billion	Ten Billion	Billion	Hundred Million	Ten Million	Million	Hundred Thousand	Ten Thousand	Thousand	Hundred	Ten	One
3	8	1	3	4	5	2	8	7	3	6	9	0	2	1
381 trillion			345 billion			287 million			369 thousand			021		

Decimal Point	Hundred -millionths	0.00000001
	Ten-millionths	0.0000001
	Millionths	0.000001
	Hundred-thousandths	0.00001
	Ten-thousandths	0.0001
	Thousandths	0.001
	Hundredths	0.01
	Tenths	0.1
Units	One	1
	Tens	10
	Hundred	100
Thousands	Thousand	1,000
	Ten Thousand	10,000
	Hundred Thousand	100,000
Millions	Millions	1000,000
	Ten Million	10,000,000
	Hundred Million	100,000,000
Billions	Billions	1000,000,000
	Ten Billion	10,000,000,000
	Hundred Billion	100,000,000,000
Trillions	Trillions	1000,000,000,000
	Ten Trillion	10,000,000,000,000
	Hundred Trillion	100,000,000,000,000



Example 1-2-1:

► Find the place value of the number 12,315.6274

Millions			Thousands			Units			Decimal System					
Hundred millions	Ten millions	Million	Hundred thousands	Ten thousands	Thousand	Hundred	Tens	One	Decimal point	Tenths	Hundredths	Thousandths	Ten-thousandths	Hundred -thousandths
				1	2	3	1	5	.	6	2	7	4	0

Round Whole Number

Example 1-3-1:

- ▶ Round 2647 to the nearest hundred.

2	6	4	7
↓	↓	↓	↓
2	6	0	0

Example 1-3-2:

- ▶ Round 2667 to the nearest hundred.

2	6	6	7
↓	↓	↓	↓
2	7	0	0

Example 1-3-3:

- ▶ Round 37,439 to first digit.

3	7	,	4	3	9
↓	↓	↓	↓	↓	↓
4	0	,	0	0	0

Example 1-3-4:

- ▶ Round 34,439 to first digit.

3	4	,	4	3	9
↓	↓	↓	↓	↓	↓
3	0	,	0	0	0

Round Decimals

Example 1-3-5:

- ▶ Round 17.3234 to the nearest hundredths.

1	7	.	3	2	3	4
↓	↓	↓	↓	↓		
1	7	.	3	2		

Example 1-3-6:

- ▶ Round 17.3284 to the nearest hundredths.

1	7	.	3	2	8	4
↓	↓	↓	↓	↓	↓	
1	7	.	3	3		

Example 1-3-7:

- ▶ Round the number to the specified place.

a) 14.342 to the nearest tenth.

1	4	.	3	4	2
↓	↓	↓	↓		
1	4	.	3		

b) \$ 28.465 to the nearest cent.

2	8	.	4	6	5
↓	↓	↓	↓	↓	↓
2	8	.	4	7	

c) BD 1,235.25124 to the nearest fifts.

1	,	2	5	3	.	2	5	1	4
↓	↓	↓	↓	↓	↓	↓	↓	↓	
1	,	2	5	3	.	2	5	0	

Week 2 - Lesson 1.4

Currency Exchange



Unit 1 : Currency Exchange

Lesson 1.4 : Money Currency System

15-27	Lesson 1.1,2,3	Reviw Numers (Write, Place , Round)	1
28 -32	Lesson 1.4	Money Currency System	
39-44	Lesson 2.1 Lesson 2.2	System of Payment Payroll by Hour & Week	2
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Learning Objective

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- ▶ place value and our number system.
- ▶ round the whole numbers.
- ▶ money and currency exchange



1.4 Money and the Currency System

Rate of Exchange:

The exchange rate is defined as the number of monetary units by which one unit of local currency is exchanged for a foreign one.



Foreign Currency		Selling BHD	Buying BHD	
	USA Dollar	USD	0.378000	0.375000
	Euro	EUR	0.474000	0.466600
	Japanese Yen	JPY	0.003632	0.363500
	Chinese Yuan Renminbi	CNY	0.058267	0.056451
	British Pound	GBP	0.524150	0.506650
	Indian Rupee	INR	0.005918	0.005168
	Thai Baht	THB	0.011938	0.108792
	Malaysian Ringgit RM	MYR	0.099942	0.084192
	Saudi Arabian Riyal	SAR	0.100650	0.100000
	Emirati Dirham	AED	0.103900	0.101400
	Kuwaiti Dinar KD	KWD	1.252950	1.238950
	Omani Rial	OMR	0.992490	0.968490
	Egyptian Pound	EGP	0.0240441	0.0220521

Example 1-4-1:

- ▶ Use the above currency exchange table in the following currency conversion
You have BHD 1000 Bahraini Dinars and would like to convert it to USA Dollar.

$$\frac{1 \times 1000}{0.378000} = \$2645.5026 = \$2645.50$$

BHD	USD
0.378	1
1000	??



Example 1-4-2:

- ▶ Use the currency exchange table in the following currency conversion:
After you return from travel, you have EGP 2500 Egyptian pounds and you want to get the Bahraini dinar.

$$\frac{2500 \times 0.0220521}{1} = \text{BHD}55.13025 \sim \text{BHD}55.130$$

BHD	EGP
0.0220521	1
??	2500



Example 1-4-3:

- ▶ Use the currency exchange table in the following currency conversion:
Mariam has GBP 1850 British Pound and she wants to convert it into Indian rupees.

$$= \frac{1850 \times 0.506650}{1} = \text{BHD}937.3025 \sim \text{BHD}937.303$$

$$= \frac{1 \times 937.303}{0.005918} = \text{INR}158381.7168 \sim \text{INR}158381.72$$

BHD	GBP
0.506650	1
??	1850



BHD	INR
0.005918	1
937.303	??



Salaries & Wages System



Unit 2 : Salaries and Wages System

Lesson 2.1 : System of Payment

Lesson 2.2 : Payroll by Hour & Week

2

Learning Objective

By the end of this unit, the student should be able to:

- ▶ identify system of payment.
- ▶ methods of payment – hour-week-month -over time.
- ▶ methods of payment – piece – rate.
- ▶ calculating payroll by commission - bonus.
- ▶ calculating deductions and adjustments to pay.



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2.1 System of Payment

There are many ways of calculating salary and wages. The following are payment methods that can be used by an organisation:

- ▶ Payment by the hour, week, month and annually.
- ▶ Piece-rate system and Bonus systems.
- ▶ Commission based upon quantity sold.
- ▶ Annual salary.



What method of payment that has been used in the Kingdom of Bahrain for the following sectors:

- ▶ Ministries.
- ▶ Banks.
- ▶ Companies and small businesses.

2.2 Payroll by Hour and Week

employed for more than **48 hours** per week
for more than **eight hours** per day



Muslim worker may not be employed during the month of Ramadan for more than **six hours** per day, or **36 hours** per week.

25 % for hours worked during the day,

50% for hours worked during the night.

150% of his normal wage or another day for rest.



Example 2-2-1:

- ▶ An employee is engaged for 46 hours during the day a week at a basic rate of BD2.500 per hour. Calculate the gross wage received during the period.

Days	FRI	SAT	SUN	MON	TUE	WED	THU
Hours	0	8	8	6	8	8	8
O.T during the day	0	0	0	0	0	0	0
O.T during the night	0	0	0	0	0	0	0



Solution:

Number of hours = $8 + 8 + 6 + 8 + 8 + 8 = 46$ hours

Total Regular Wage = $46 \times \text{BHD}2.500$

= **BHD115.000**



Example 2-2-2:

► Jameel worked the following hours during the week in Jan 2021:

Week	FRI	SAT	SUN	MON	TUE	WED	THU
1	1 JAN	2 JAN	3 JAN	4 JAN	5 JAN	6 JAN	7 JAN
	0	8	8	7	8	8	8
2	8 JAN	9 JAN	10 JAN	11 JAN	12 JAN	13 JAN	14 JAN
	0	8	8	8	8	8	5
3	15 JAN	16 JAN	17 JAN	18 JAN	19 JAN	20 JAN	21 JAN
	0	6	8	8	8	8	8
4	22 JAN	23 JAN	24 JAN	25 JAN	26 JAN	27 JAN	28 JAN
	0	8	8	8	8	8	8
5	29 JAN	30 JAN	31 JAN	1 FEB	2 FEB	3 FEB	4 FEB
	0	8	8	8	8	6	8

Calculate the wage for the month of January 2021, the average hourly wage is BHD 2.800.

Solution:

1	1 JAN	2 JAN	3 JAN	4 JAN	5 JAN	6 JAN	7 JAN
	0	8	8	7	8	8	8

Number of hours: week 1 = $8 + 8 + 7 + 8 + 8 + 8 = 47$ hours

2	8 JAN	9 JAN	10 JAN	11 JAN	12 JAN	13 JAN	14 JAN
	0	8	8	8	8	8	5

week 2 = $8 + 8 + 8 + 8 + 8 + 5 = 45$ hours

3	15 JAN	16 JAN	17 JAN	18 JAN	19 JAN	20 JAN	21 JAN
	0	6	8	8	8	8	8

week 3 = $6 + 8 + 8 + 8 + 8 + 8 = 46$ hours

4	22 JAN	23 JAN	24 JAN	25 JAN	26 JAN	27 JAN	28 JAN
	0	8	8	8	8	8	8

week 4 = $8 + 8 + 8 + 8 + 8 + 8 = 48$ hours

5	29 JAN	30 JAN	31 JAN	1 FEB	2 FEB	3 FEB	4 FEB
	0	8	8	8	8	6	8

week 5 = $8 + 8 = 16$ hours

Total Working Hours = 202 hours

Total Regular Wage = $202 \times 2.800 = \text{BHD}565.600$



Example 2-2-3:

► Ahmed worked the following hours during the week in:

Days	FRI	SAT	SUN	MON	TUE	WED	THU
Hours	8	8	8	6	8	8	8
O.T during the day	0	2	0	3	0	2	0
O.T during the night	0	0	1	0	2	3	0

Calculate the total wage during the week, if you know that the average hourly wage is BHD 3.000.

$$\text{Regular Wage} = (8 + 8 + 8 + 6 + 8 + 8 + 8) \times 3 = \text{BHD}162.000$$

$$\text{Wage of Weekly rest day (Friday)} = 8 \times 3 \times 1.50 = \text{BHD} 36.000$$

$$\text{Over Time of during the day} = (2 + 3 + 2) \times 3 \times 1.25 = \text{BHD} 26.250$$

$$\text{Over Time of during the night} = (1 + 2 + 3) \times 3 \times 1.50 = \text{BHD} 27.000$$

$$\text{Total Wages} = 162.000 + 36.000 + 26.250 + 27.000 = \text{BHD} 251.250$$

Week 4 - Lesson 2.3,4

Piece-rate Commission & Bonus



Unit 2 : Salaries and Wages System

Lesson 2.3 : Payroll by Piece & Rate

Lesson 2.4 : Payroll by Commission & Bonus

15-27	Lesson 1.1,2,3 Reviw Numers (Write, Place , Round)	1
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Learning Objective

2

By the end of this unit, the student should be able to:

- ▶ identify system of payment.
- ▶ methods of payment – hour-week-month -over time.
- ▶ methods of payment – piece – rate.
- ▶ calculating payroll by commission - bonus.
- ▶ calculating deductions and adjustments to pay.



2.3 Payroll by Piece & Rate System

Piece-rate system; in which the employee is paid for each unit of output (piece) produced. Article No (38). of the Labor Law stipulates wages may be calculated by the hour, day, week, month, on a piece-rate or per production. Wages shall not be deemed to be calculated on a piece-work or production basis unless expressly specified in the labour contract.



Example 2-3-1:

- Khalid an employee at Gulf Plastic co. is given BHD0.750 as piece rate of work. Find his total pay for a September 2021, if his total production for that month was 360 pieces?

Solution: Total wage pay = Number produced × Rate per piece

$$= 360 \times 0.750 = \text{BHD } 270.000$$

Find the missing value in the following table:

No	Employee	Salary BHD	Total Sales BHD	Commission		Total Salary
				Rate	BHD	
1	Tariq	500	5000	1%	???	BHD ???
2	Majed	320	???	2%	200	BHD ???



Example 2-4-1:

Nasser works as a salesman in a company for a base salary of **BHD 300** per month plus a commission of **5%** of sales. If he has made sales of **BHD2000** at the end of the Mar 2021. What is the gross salary for this employee for the Mar 2021?

Solution:

$$\text{Commission} = 5\% \times 2000 = \text{BHD } 100$$

$$\begin{aligned} \text{Total gross wage} &= \text{Basic wage} + \text{Commission} \\ &= 300 + 100 = \text{BHD } 400 \end{aligned}$$



Example 2-4-2:

Ahmed, an employee, is paid a basic salary of BHD 300 per month, followed by a **graduated commission** of **2½%** on the first **BHD 1,000** of sales and **5%** thereafter.

What will he earn in a week when sales total BHD4,700?

Solution:

$$\text{Commission on the first BD1,000} = 2\frac{1}{2}\% \times 1,000 = \text{BHD } 25$$

$$\text{Balance} = 4,700 - 1,000 = \text{BHD } 3,700$$

$$\text{Commission on the balance} = 5\% \times 3,700 = \text{BHD } 185$$

$$\begin{aligned} \text{Total gross wage} &= \text{Basic wage} + \text{Commission} \\ &= 300 + 25 + 185 = \text{BHD } 510. \end{aligned}$$



Example 2-4-3:

Rashid works as a sales employee with a monthly salary of **BHD300** per month in addition **bonus** to **5%** of annual sales, which are over **BHD30000**. If its annual sales reach **45000**. Find his annual salary.

Solution:

$$\text{Annual bonus} = (45000 - 30000) \times 5\% = \text{BHD } 750$$

$$\text{Annual salary} = 300 \times 12 = \text{BHD } 3600$$

$$\text{Total annual salary} = 3600 + 750 = \text{BHD } 4350$$

Week 5 - Lesson 2.5

Deductions

Unit 2 : Salaries and Wages System

Lesson 2.5 : Deductions

50

2

Learning Objective

By the end of this unit, the student should be able to:

- ▶ identify system of payment.
- ▶ methods of payment – hour-week-month -over time.
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- ▶ calculating payroll by commission - bonus.
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Deductions:

- ▶ Deductions is the money that is deducted from the employee's salary for different purposes like pension funds, social insurance or the repayment of debts or loans.

On a monthly draw basis and the following deductions are made:

- 6% Pension Fund Contribution Deduction (Basic Salary + Social Allowance) **Public** sector.
- 7% as social insurance. (Basic Salary + Fixed allowances) **Private** Sector.
- 1% Unemployment Insurance Deduction.
- Housing Bank Loan Repayment Deduction.
- Law Court Deduction.

PERSONEL INFORMATION

Ministry	EDUC-MINISTRY OF EDUCATION
CPR	XXXXXXXXXX
Name	AHMED ALI AHMED
Position Title	SPECIALIST
Month	05-2021
Grade-Step	A7-Step 13
Bank-name	AHLJ UNITED BANK
Acc.No.	0013XXXX-069

PAYMENT INFORMATION

Basic Salary	1,277.000
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ALLOWANCES

Social Allowance	70.000
Transport Allowance	20.000
Living Standard Improving Allowance	50.000
Total Allowances	1,417.000

Pension Fund Contribution	4.200
Unemployment Insurance	13.470
Housing Bank Loan	171.000
Total Deduction	265.290
Net Salary	1,151.710

Example 2-5-2:

- ▶ Ahmed Ali works in the Ministry of Education earning BHD1277 as basic salary, BHD70 as social allowance, BHD20 as transport allowance and BHD50 as living standard improving allowance.
Calculate his net salary for May 2021 if the housing bank loan is BHD 171.

Solution:

- Total allowances = Social allowance + Transport allowance + living standard improving allowance

$$= 70 + 20 + 50 = \text{BHD } 140$$
- Pension Fund Contribution = (basic salary + Social allowance) \times 6%

$$= (1277 + 70) \times 6\% = \text{BHD } 80.820$$
- Unemployment Insurance = (basic salary + Social allowance) \times 1%

$$= (1277 + 70) \times 1\% = \text{BHD } 13.470$$
- Total deduction = Pension Fund Contribution + Unemployment Insurance + Housing bank loan

$$= 80.820 + 13.470 + 171 = \text{BHD } 265.290$$
- Net salary = (1277 + 140) - 265.290 = BHD1151.710



Example 2-5-1:

- Moh'd works in a private sector in the Bahrain Co., with a basic monthly salary of BHD 400 and BD30 as a monthly qualification allowance. And BHD 20 as phone allowances this month only. Deducted per month BHD 50 law court. Calculate his net salary for the month?

Solution:

- Total allowances = qualification allowance + phone allowances
$$= \quad \quad \quad 30 \quad \quad \quad + \quad \quad \quad 20 \quad \quad = \text{BHD } 50$$
- Social Insurance = (basic salary + qualification allowance) \times 7%
$$= (\quad 400 \quad + \quad 30 \quad) \times 7\% \quad = \text{BHD } 30.100$$
- Unemployment Insurance = (basic salary + qualification allowance) \times 1%
$$= (\quad 400 \quad + \quad 30 \quad) \times 1\% = \text{BHD } 4.300$$
- Total deduction = Social Insurance + Unemployment Insurance + Law Court Deduction
$$= \quad 30.1 \quad + \quad 4.300 \quad + \quad 50 \quad = \text{BHD } 84.400$$
- Net salary = basic salary + Total allowances
$$= (400 + 50) - 84.400 = \text{BHD } 365.600$$

Week 6 - Lesson 3.1

Trade Discounts

Unit : Discounts and Pricing Goods

Lesson 3.1 : Trade Discount

65



3

Learning Objective

By the end of this unit, the student should be able to:

- ▶ calculating discounts, selling price and purchase price.
- ▶ calculating customs and tariffs.
- ▶ pricing goods.
- ▶ preparing the invoice.

15-27	Lesson 1.1,2,3 Reviw Numers (Write, Place , Round)	1
28 -32	Lesson 1.4 Money Currency System	
39-44	Lesson 2.1 System of Payment Lesson 2.2 Payroll by Hour & Week	2
45-49	Lesson 2.3 Payroll by Piece & Rate Lesson 2.4 Payroll by Commission & Bonus	
50-54	Lesson 2.5 Deductions	
65-72	Lesson 3.1 Trade Discount	3
73-76	Lesson 3.2 Cash Discount	
77-84	Lesson 3.3 Value Added Tax (VAT) Lesson 3.4 Tariff in the Kingdom of Bahrain	
85-96	Lesson 3.5,6 Pricing goods Based on (Cost - Selling) Lesson 3.7 Mark -Down	4
105-114	Lesson 4.1 The Concept of Simple Interest Lesson 4.2 Formula of Simple Interest & amount Lesson 4.3 Simple Interest (months - years - months & years)	
115-119	Lesson 4.3 Simple Interest (days- Counting Days) Lesson 4.4 Exact and Trade Interest	
120-125	Lesson 4.5 Finding Factors of Simple Interest	



Trade Discount



Important Points 3-1-1:

▶ Trade Discount = List Price × Discount Rate

▶ Discount Rate = $\frac{\text{Trade Discount}}{\text{List Price}} \times 100$

▶ List Price = $\frac{\text{Net Price}}{\text{Complement of Trade Discount Rate}}$





INVOICE

Date: 04/09/2022

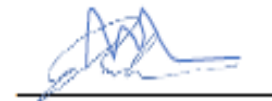


Invoice No.: 05241


https://www.instagram.com/xxxxx_bh/

To: Salman Hamad Moh'd

No.	Items Details	Quantity	Unit Price		Total Price	
			BHD	Fils	BHD	Fils
1	Laptop	1	520	000	520	000
					Total Price	520.000
					Discount 30%	156.000
					Net Price	364.000


 Signature


Example 3-1-1:

- The list price of a laptop is BHD520. ABC Computer Co, gives a 30% discount to all retailers. What is the amount of trade discount and payment (net price)?



Solution:

- Trade Discount = List Price × Discount Rate

$$= 520 \times 30\% = \text{BHD}156$$
- Net Price (Payment) = List price – Trade Discount Or $100\% - 30\% = 70\%$

$$= 520 - 156 = \text{BHD}364 \quad = 520 \times 70\% = \text{BHD}364$$



Example 3-1-2:

- ▶ Retailer's net price is BHD160 for Air-Conditioning with a list price of BHD200. What is the discount rate?



Solution:

- Trade Discount = List Price - net price
= 200 - 160 = BHD 40

- Discount Rate = $\frac{\text{Trade Discount}}{\text{List Price}} \times 100$

- Discount Rate = $\frac{40}{200} \times 100 = 20\%$





Example 3-1-3:

► A car workshop made a special offer through instagram to buy three tires (while) and the fourth is for Free If the value of each one is BHD20. what is the net price and discount rate?



Solution:

- Net Price = List Price - Trade Discount
= 80 - 20 = BHD60

- Discount Rate = $\frac{\text{Trade Discount}}{\text{List Price}} \times 100$

$$\text{Discount Rate} = \frac{20}{80} \times 100 = 25\%$$



Telephone: 178888xx
Fax: 178888xx- PO Box 44x
Manama – Kingdom of Bahrain

INVOICE

Invoice No.: 457869



https://www.instagram.com/xxxxx_bh/

Date: 09 Nov 2021

To: Jamal Amar Ali

S. No. Items	Items Details	Quantity	Unit Price		Total Price	
			BHD	Fils	BHD	Fils
1	Wheels	4	20	000	80	000
					Total Price	80.000
					Discount 25%	20.000
					Net Price	60.000


Signature



Example 3-1-5:

► IKEA gave a discount card (IKEA Family Members) to the customer at a rate 10%. If the customer paid BHD 225. What is the list price of the item?



Solution:

- List price = $\frac{225}{(100\% - 10\%)}$ = BHD250

Week 7 - Lesson 3.1

Cash Discounts

Unit 3 : Discounts and Pricing Goods

Lesson 3.2 : Cash Discount

73

15-27	Lesson 1.1,2,3	Reviw Numers (Write, Place , Round)	1
28 -32	Lesson 1.4	Money Currency System	
39-44	Lesson 2.1	System of Payment	2
	Lesson 2.2	Payroll by Hour & Week	
45-49	Lesson 2.3	Payroll by Piece & Rate	
	Lesson 2.4	Payroll by Commission & Bonus	
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85-96	Lesson 3.5,6	Pricing goods Based on (Cost - Selling)	
	Lesson 3.7	Mark -Down	
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	Lesson 4.2	Formula of Simple Interest & amount	
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115-119	Lesson 4.3	Simple Interest (days- Counting Days)	
	Lesson 4.4	Exact and Trade Interest	
120-125	Lesson 4.5	Finding Factors of Simple Interest	

3

Learning Objective

By the end of this unit, the student should be able to:

- ▶ calculating discounts, selling price and purchase price.
- ▶ calculating customs and tariffs.
- ▶ pricing goods.
- ▶ preparing the invoice.



Example 3-2-1:

- Adam received an invoice dated 04th July 2022 from Phone store. that shows a net price of BHD 450 with the terms 2/10, n/30.

- a) Find the latest date the cash discount is allowed.

Solution:

- a) The cash discount is allowed up to and including 10 days from the invoice date 04th July 2022.



- b) How much will he pay on 12 July 2022?

b) On 12 July 2022:

$$\begin{aligned} \text{Cash Discount} &= \text{Net Price} \times \text{Cash Discount} \\ &= 450 \times 2\% = \text{BHD } 9 \\ \text{Net amount} &= \text{Net Price} - \text{Cash Discount} \\ &= 450 - 9 = \text{BHD } 441 \end{aligned}$$

- c) How much will he pay assuming on 16 July 2022?

- c) On 16 July 2022: Pay the net price of invoice BHD450 without cash discount.



Telephone: 171212xx
 Fax: 171212xx – PO Box 78x
 Muharraq – Kingdom of Bahrain

https://www.instagram.com/xxxxx_bh/

INVOICE

Date: 04-07-2022



Invoice No.: 00541

To: Adam Eid Jassim

Term: 2/10, n/30

S. No. Items	Items Details	Quantity	Unit Price		Total Price	
			BHD	Fils	BHD	Fils
1	Phone	4	125	000	500	000
					/	

Signature

Total Price	500.000
Discount 10%	50.000
Net Price	450.000

Meaning of Some Trade Terms That Might Appear on the Invoices

Terms	Meaning
3/10	3% discount if payment made within 10 days of invoice date.
1/30	1% discount if payment made within 30 days of invoice date.
2/10, E.O.M.	2% discount within 10 days of beginning of next month (E.O.M. means End Of Month).
n/30	Net within 30 days of invoice date.
3/10,n/30, R.O.G.	3% within 10 days of Receipt Of Goods (R.O.G.), net from 11 th to 30 th day.



Example 3-2-2:

- ▶ The goods listed on the ABB Tools Store invoice shown were received on 26th March 2022 and the bill was paid on 2nd April 2022. How much was the amount paid?



TOOLS STORE

Tel: 173311xx – PO Box 874x
Isa Town – Kingdom of Bahrain



No. M44452

Date: 26-03-2022

Terms: 4/10, n/30,
R.O.G.

INVOICE



Name: Ali Ahmed Maher

https://www.instagram.com/xxxxx_bh

Solution:

The 4% discount applies since payment was made within 10 days of receipt of goods.

$$\begin{aligned} \text{Cash Discount} &= (\text{Net price} - \text{Freight}) \times \text{Cash discount} \\ &= (726.310 - 29.850) \times 4\% = \text{BHD } 27.860 \\ \text{Total Paid} &= \text{Net Price} - \text{Cash Discount} \\ &= 726.310 - 27.860 = \text{BHD } 698.450 \end{aligned}$$

No. Items	Items Details	Quantity	Unit Price		Total Price	
			BHD	Fils	BHD	Fils
1	Leverage Cutters	40	18	950	758	000
2	Expansive Bit	50	6	950	347	500
Subtotal					1,105	500
Less 30% and 10%					409	040
Balance					696	460
Freight					29	850
Total BD					726	310

CASH	US\$	OTHERS	AMEX	VISA	MASTER	DINARS

Signature: _____

Week 8 - Lesson 3.3,4

Value added Tax VAT Tariff in the Bahrain

Unit 3 : Discounts and Pricing Goods

Lesson 3.3	: Value Added Tax (VAT)	77
Lesson 3.4	: Tariff in the Kingdom of Bahrain	81

15-27	Lesson 1.1,2,3	Reviw Numers (Write, Place , Round)	1
28 -32	Lesson 1.4	Money Currency System	
39-44	Lesson 2.1	System of Payment	2
45-49	Lesson 2.2	Payroll by Hour & Week	
	Lesson 2.3	Payroll by Piece & Rate	
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115-119	Lesson 4.3	Simple Interest (days- Counting Days)	
	Lesson 4.4	Exact and Trade Interest	
120-125	Lesson 4.5	Finding Factors of Simple Interest	

3

Learning Objective

By the end of this unit, the student should be able to:

- ▶ calculating discounts, selling price and purchase price.
- ▶ calculating customs and tariffs.
- ▶ pricing goods.
- ▶ preparing the invoice.

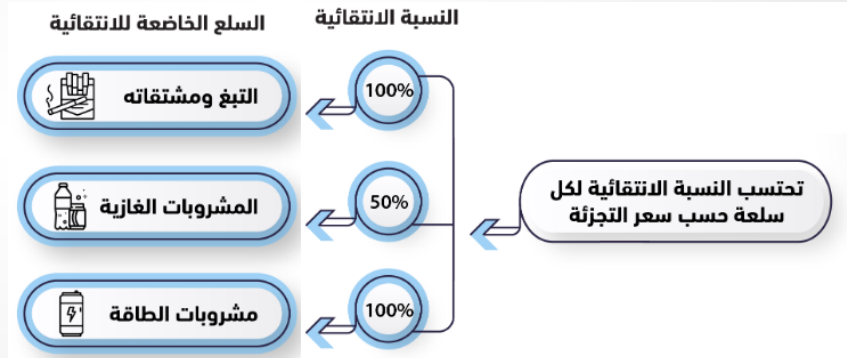
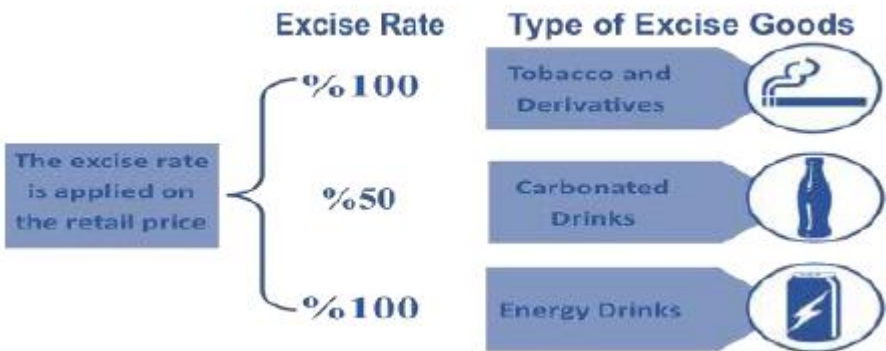


VAT:

VAT is an indirect tax on consumer spending. It is collected on supplies of goods and services as well as on imports of goods and services into Bahrain.

Bahrain introduced VAT on 1 January 2022. The standard rate will be 10%. Certain goods and services will be subject to a zero-rate (0%) of VAT and others will be exempt from VAT.

Rate	Type	Supply	التوريد	النوع	نسب القيمة المضافة	
Zero-Rate	Basic needs	Basic food items	السلع الغذائية الأساسية	الاحتياجات الأساسية	نسبة الصفر بالمائة	
	Education	Private deucation services	خدمات التعليم الخاص	التعليم		
	Health	Private preventative and basic healthcare services	خدمات الرعاية الصحية الوقائية والأساسية الخاصة	أدوية وتجهيزات طبية معينة		الصحة
		Specific medicine and medical equipment				
	Oil and Gas	Domestic Oil and Gas	النفط والغاز	النقل المحلي		النفط والغاز
		Transport	Domestic transportation			النقل الدولي
	Real Estate	Constructon services of new buildings	خدمات تشييد المباني الجديدة	الأحجار ذات القيمة		العقارات
		Commodities	Precious stones			الذهب والفضة والبلاتين الاستثماري
	International Trade	Export of goods	تصدير السلع	تصدير الخدمات		التجارة الدولية
		Export of seivces	تصدير الخدمات			
Exempt	Real Estate	Sales and rental residential and commercial Real Estate	بيع وتأجير العقارات التجارية والسكنية	العقارات	المعفاة	
	Financial Services	Financial services (e.g.interest income generated by the grandtng of a loan and the sale of shared)	بعض الخدمات المالية (على سبيل المثال ، إيرادات الفوائد من القروض الممنوحة وبيع الأسهم)	الخدمات المالية		





Example 3-3-1:

- Fahad bought the following from supermarket. Calculate the value added tax and Excise Goods for the following purchases:



Milk 1 liter

BHD 0.450



Tv 21" inch

BHD 50.000



Energy Drinks

BHD 1.250

Solution:

- VAT Milk 1 liter = $0.450 \times 0\% = \text{BHD } 0.000$
- VAT Tv 21" = $50.000 \times 10\% = \text{BHD } 5.000$
- Excise Goods Energy Drinks = $1.250 \times 100\% = \text{BHD } 1.250$
- Total VAT & Excise Goods = BHD 6.250
- Total Pay = $(0.450 + 50.000 + 1.250) + 6.250 = \text{BHD } 57.950$

The Bahrain Customs Tariff rates are divided into four groups: Free duty, 5%, 100% and 125%. The following table gives examples of common goods in each of the four groups. Table (3-4-1) include the Bahrain customs example which you can refer to in the search engines for more information.

Duty %	Example of common goods
Free Duty Exempt	Fresh vegetable and fruits, fresh or frozen fish, diary, meat, all other alive animals that are used for human consumption, books, magazines, catalogues, and all other printed papers for advertising. Includes <u>428</u> listed commodities, mostly food and medical products
10%	All imported items like clothes, perfumes, cars, electronics like television, videos, and calculator.
100%	Tobacco and Tobacco related products.
125%	Alcoholic beverages.



Example 3-4-1:

- ▶ Al-Adliya Furniture imported furniture at cost of BHD12,600. Calculate customs paid on the furniture according to the tariff rate in the Kingdom of Bahrain.

Solution:

$$\begin{aligned}\text{Customs} &= 10\% \times 12,600 \\ &= \text{BHD}1260\end{aligned}$$



Example 3-4-2:

- ▶ Carrefour Stores imported the following items last month:
 - Quantity of fresh vegetables and fruits amounting to BHD1,780.
 - Electronic items amounting to BHD23,420.
 - Cigarettes and tobacco amounting to BHD 1,910.400.

Calculate how much customs Carrefour Stores paid at customs for all these items.

Solution:

- Fresh vegetable and fruits Duty Free (Duty Exempt)
- Customs on electronica items = Amount paid × Rate of Customs
$$= 23,420 \times 10\% = \text{BHD}2,342.$$
- Customs on cigarettes and tobacco = $1,910.400 \times 100\% = \text{BHD}1,910.400$
- Total Customs = $2,342 + 1,910.400 = \text{BHD}4,252.400$

Complete the following invoice:



Gulf Co

NO: 04511

TRN:220045212133401

Vat Invoice



gulfbah21@hotmail.com



gulf.co2021



Name: ...Osawa Ahmed..... CPR:85002164L2 Te: ...3924510**.....

Date: ...12.Sep.2021..

<u>Qty</u>	<u>Item</u>	<u>Unit Price</u>	<u>Total</u>
1	Mobile Phone	200.000
2	Wireless Headphones	50.000
		Total BHD	_____
		Trade Discount 10%
		Net Price
		Vat 10%
		Payment amount	_____
			=====

Week 9 - Lesson 3.5,6,7

Mark UP & Down

Unit 3 : Discounts and Pricing Goods

Lesson 3.6	: Pricing goods Based on Selling Price	89
Lesson 3.7	: Mark-Down	93

15-27	Lesson 1.1,2,3	Reviw Numers (Write, Place , Round)	1
28 -32	Lesson 1.4	Money Currency System	
39-44	Lesson 2.1	System of Payment	2
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	Lesson 4.4	Exact and Trade Interest	
120-125	Lesson 4.5	Finding Factors of Simple Interest	

3

Learning Objective

By the end of this unit, the student should be able to:

- ▶ calculating discounts, selling price and purchase price.
- ▶ calculating customs and tariffs.
- ▶ pricing goods.
- ▶ preparing the invoice.





Mark-up:

- ▶ The difference between the selling price and the cost of any goods is called the mark-up.



Important Points 3-5-1:

- Amount of Mark-up based on cost = Selling price – Cost
- Percentage of Mark- up = $\frac{\text{Selling Price} - \text{Cost}}{\text{Cost}} \times 100$



Important Points 3-6-1:

- ▶ Amount of Margin of Profit = Selling Price – Cost
- ▶ Percentage of Margin of Profit = $\frac{\text{Selling Price} - \text{Cost}}{\text{Selling Price}} \times 100$



Example 3-5-1:

- ▶ A retailer's cost for a digital camera was BHD210.500. The camera was sold for BHD250.500. What was the mark-up amount and percentage based on cost?

Solution:



- Amount of Mark-up based on cost = Selling price – Cost

$$= 250.500 - 210.500 = \text{BHD}40$$
- Percentage of Mark- up = $\frac{\text{Selling Price} - \text{Cost}}{\text{Cost}} \times 100$

$$= \frac{250.500 - 210.500}{210.500} \times 100 = 19\%$$



Example 3-6-1:

- ▶ A retailer sells a television that costs BHD525.750 for BHD679.950. What is the percentage of mark-up based on the selling price or margin of profit (to the nearest percentage)?

Solution:

- Amount of Margin of Profit = Selling Price - Cost

$$= 679.950 - 525.750 = \text{BHD}154.200.$$
- Percentage of Margin of Profit = $\frac{\text{Selling Price} - \text{Cost}}{\text{Selling Price}} \times 100$

$$= \frac{679.950 - 525.750}{679.950} \times 100 = 22.68\%$$





Example 3-6-2:

- ▶ The percentage of margin of profit of a refrigerator was 25%. The selling price was BHD579. What was the amount of the margin of profit and cost?



579
BHD

Solution (1):

$$\begin{aligned} \text{Margin of profit amount} &= \text{Margin of profit percentage} \times \text{Selling price} \\ &= 25\% \times 579 = \text{BHD}144.750. \end{aligned}$$

$$\begin{aligned} \text{Cost} &= \text{Selling price} - \text{Margin of profit amount} \\ &= 579 - 144.750 = \text{BHD}434.25 \end{aligned}$$



Example 3-6-2:

- ▶ A retailer knows that consumers will pay at most BHD21.000 for a men's suit and wants a 30% margin of profit. What is the maximum cost that the retailer may pay for the dress?



Solution (1):

$$\begin{aligned} 1) \text{ Margin of profit} &= 30\% \times \text{Selling price} \\ &= 30\% \times 21 = \text{BHD} 6.300 \end{aligned}$$

$$\begin{aligned} 2) \text{ Maximum cost} &= \text{Selling price} - \text{Margin of profit} \\ &= 21.000 - 6.300 = \text{BHD}14.700 \end{aligned}$$

Solution (2):

$$\begin{aligned} \text{Maximum cost} &= \text{Selling Price} \times (100\% - \text{Margin of Profit \%}) \\ &= 21.000 \times (100\% - 30\%) \\ &= 21.000 \times 70\% = \text{BHD}14.700 \end{aligned}$$



Important Points 3-6-1:

- ▶ Mark-Down = Regular Price – Sale Price
- ▶ Percentage Amount of Mark-Down = $\frac{\text{Regular Price} - \text{Sale Price}}{\text{Regular Price}} \times 100$
- ▶ Mark-Down = Regular Price x Percentage Amount of Mark-Down

3.7 Mark-Down



Example 3-7-1:

- ▶ A casting reel regularly priced at BHD36.290 is on sale for BHD29.950. What is the **Mark-down**?



Solution (1):

$$\begin{aligned} \text{Mark-Down} &= \text{Regular Price} - \text{Sale Price} \\ &= 36.290 - 29.950 = \text{BHD}6.340 \end{aligned}$$

Solution (2):

$$\begin{aligned} \text{Percentage Amount of Mark-Down} &= \frac{\text{Regular Price} - \text{Sale Price}}{\text{Regular Price}} \times 100 \\ &= \frac{36.290 - 29.950}{36.290} \times 100 \\ &= 17.47\% \end{aligned}$$

$$\begin{aligned} \text{Mark-Down} &= \text{Regular Price} \times \text{Percentage Amount of Mark-Down} \\ &= 36.290 \times 17.47\% = \text{BHD}6.340 \end{aligned}$$



Example 3-7-2:

- ▶ In the bookstore advertisement the mark-down is 20%. The regular price of a book is BHD24.500. What is the **mark-down** on the book?



$$\begin{aligned} \text{Solution: Mark-down} &= \text{Regular price} \times \text{Percentage of mark-down} \\ &= 24.500 \times 20\% = \text{BHD}4.900 \end{aligned}$$



Example 3-7-3:

- ▶ A tailor has a suit for sale marked at BHD35.000 which is shop-soiled. He **marks it down** by 33 $\frac{1}{3}$ %. What will its sale price be (round to the nearest fils)?



$$\begin{aligned} \text{Solution: Mark-down} &= \text{Percentage of Mark-down} \times \text{Regular price} \\ &= 33\frac{1}{3}\% \times 35.000 = \text{BHD}11.667 \end{aligned}$$

$$\begin{aligned} \text{Sale price} &= \text{Regular price} - \text{Mark-down} \\ &= 35.000 - 11.667 = \text{BHD}23.333 \end{aligned}$$

Week 10 - Lesson 4.1,2,3

Simple Interest

Unit 4 : Simple Interest

Lesson 4.1	: The Concept of Simple Interest	105
Lesson 4.2	: Formula of Simple Interest & amount	108
Lesson 4.3	: Simple Interest Solved Example	109

15-27	Lesson 1.1,2,3 Reviw Numers (Write, Place , Round)	1
28 -32	Lesson 1.4 Money Currency System	
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77-84	Lesson 3.3 Value Added Tax (VAT) Lesson 3.4 Tariff in the Kingdom of Bahrain	
85-96	Lesson 3.5,6 Pricing goods Based on (Cost - Selling) Lesson 3.7 Mark -Down	
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115-119	Lesson 4.3 Simple Interest (days- Counting Days) Lesson 4.4 Exact and Trade Interest	4
120-125	Lesson 4.5 Finding Factors of Simple Interest	

4

Learning Objective

By the end of this unit, the student should be able to:

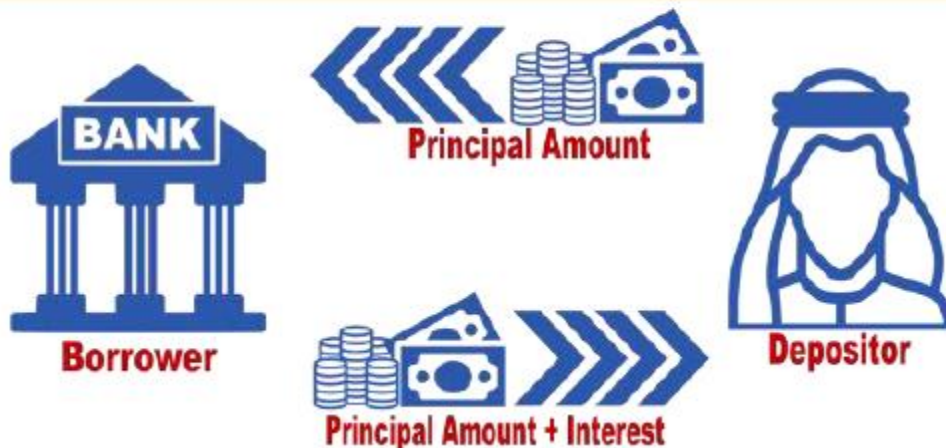
- ▶ recognize the concept of interest.
- ▶ identify the concept of time value of money.
- ▶ explain the different types of the simple interest.
- ▶ identify the method of calculating Simple Interest for various periods
- ▶ identify the method of calculating trade & exact simple interest.





Simple Interest:

- ▶ Simple interest is the most basic way to calculate the amount you will earn or pay for an investment or loan.



Important Points 4-1-1:

Simple Interest = Principal × Interest Rate × Time

$$SI = P \times R \times T$$



Important Points 4-1-2:

- ▶ The general formula for finding the repayment/ total investment amount:

$$\text{Repayment/ total investment amount} = \text{Simple interest} + \text{Principal}$$

$$A = SI + P$$

$$\text{Or } A = P (R \times T + 1)$$

$$\text{Or } A = (P \times R \times T) + P$$

A) Simple Interest - Years



Example 4-3-1:

- Huda invested BHD 5,000 in N.B.B with interest rate of 4%. How much interest would she earn after 3 years? what is the total amount of her investment?

Solution:

$$\text{Simple Interest} = \text{Principal} \times \text{Interest Rate} \times \text{Time}$$

$$\begin{aligned} \text{S.I} &= \text{P} \times \text{R} \times \text{T} \\ &= 5,000 \times 4\% \times 3 = \text{BHD}600 \end{aligned}$$

$$\text{Amount} = \text{Principal} + \text{Simple Interest}$$

$$\begin{aligned} \text{A} &= \text{P} + \text{S.I} \\ &= 5,000 + 600 = \text{BHD} 5,600 \end{aligned}$$

NO	Principal	Interest Rate	Time / Period	Interest	Amount
1	BHD 2,750	10 %	8 Years	BD???	BD???

B) Simple Interest – Months



Example 4-3-3:

- Nasser deposited BHD1,000 into a saving account at a Bank for 9 months. The annual simple interest rate on this account is 3.5%. How much will Nasser have at the end of that period?

Solution: $\text{S.I} = \text{P} \times \text{R} \times \text{T}$ Divide the number of months by 12

$$= 1,000 \times 3.5\% \times 9 \div 12 = \text{BHD}26.250$$

$$\begin{aligned} \text{A} &= \text{P} + \text{S.I} \\ &= 1,000 + 26.250 = \text{BHD}1,026.250 \end{aligned}$$

C) Simple Interest - Years & Months



Example 4-3-4:

- BHD7,500 is deposited at simple interest rate 12% per year. Find the balance after 2 years and 5 months.

$$\begin{aligned} 2 \text{ years} \times 12 &= 24 \text{ months} \\ &+ 5 \text{ months} \\ &\underline{\underline{29 \text{ months}}} \end{aligned}$$

Solution: $\text{S.I} = \text{P} \times \text{R} \times \text{T}$

$$= 7,500 \times 12\% \times 29 \div 12 = \text{BHD}2,175$$

$$\begin{aligned} \text{A} &= \text{P} + \text{S.I} \\ &= 7,500 + 2,175 = \text{BHD} 9,675 \end{aligned}$$

Week 11 - Lesson 4.3,4

Trade & Exact

Unit 4 : Simple Interest

Lesson 4.4 : Exact and Trade Interest

118

15-27	Lesson 1.1,2,3	Reviw Numers (Write, Place , Round)	1
28 -32	Lesson 1.4	Money Currency System	
39-44	Lesson 2.1 Lesson 2.2	System of Payment Payroll by Hour & Week	2
45-49	Lesson 2.3 Lesson 2.4	Payroll by Piece & Rate Payroll by Commission & Bonus	
50-54	Lesson 2.5	Deductions	
65-72	Lesson 3.1	Trade Discount	3
73-76	Lesson 3.2	Cash Discount	
77-84	Lesson 3.3 Lesson 3.4	Value Added Tax (VAT) Tariff in the Kingdom of Bahrain	
85-96	Lesson 3.5,6 Lesson 3.7	Pricing goods Based on (Cost - Selling) Mark -Down	
105-114	Lesson 4.1 Lesson 4.2 Lesson 4.3	The Concept of Simple Interest Formula of Simple Interest & amount Simple Interest (months - years - months & years)	4
115-119	Lesson 4.3 Lesson 4.4	Simple Interest (days- Counting Days) Exact and Trade Interest	
120-125	Lesson 4.5	Finding Factors of Simple Interest	

4

Learning Objective

By the end of this unit, the student should be able to:

- ▶ recognize the concept of interest.
- ▶ identify the concept of time value of money.
- ▶ explain the different types of the simple interest.
- ▶ identify the method of calculating Simple Interest for various periods
- ▶ identify the method of calculating trade & exact simple interest.



- a) **Trade (Ordinary) Simple:** The calculation of this interest is based on 360 calendar days only. This method is used if it's required or when type of interest is not mentioned.
- a) **Exact Simple Interest:** This interest is calculated based on the number of days per month per year using a 365 days calendar year. This method is used when its required or if currency is Sterling Pound (£) or Kuwaiti Dinar (KD).



Important Points 4-4-1:

- ▶ Trade S.I: $T.I = P \times R \times T \div 360$
- ▶ Exact S.I: $E.I = P \times R \times T \div 365$



Example 4-4-1:

- ▶ Ali invested BD 2,000 at 6% for 120 days. Find the Trade and Exact simple interest?

Solution:

Trade S.I: $T.I = P \times R \times T \div 360$
 $= 2,000 \times 6\% \times 120 \div 360 = \text{BHD } 40$

Exact S.I: $E.I = P \times R \times T \div 365$
 $= 2,000 \times 6\% \times 120 \div 365 = \text{BHD } 39.452$

(Counting Days)



Reading 4-3-1:

Using time table for a regular year that divide by 4 with fraction (i.e year 2023), February is 28 days.

▶ For a leap year that divide by 4 without fraction (i.e year 2024), February is 29 days. We may need to add 1 if the date 29 is within the period.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
31	28	31	30	31	30	31	31	30	31	30	31	31	29	31
2023												2024		



Example 4-3-6:

▶ Find the number of days from 15 March, 2020 to 18 October, 2020.

Solution: $T_1 = 15$ March From Timetable = 74 days

$T_2 = 18$ October From Timetable = 291 days

∴ N. of days (T) = $291 - 74 = 217$ days



Example 4-3-7:

▶ Find the number of days from 9 November 2019 to 14 July 2020.

Solution: $T_1 = 9$ November 2019 From Timetable = 313 days

$T_2 = 14$ July 2020 From Timetable = 195 days

∴ N. of days (T) = $365 - 313 + 195 = 247 + 1 = 248$ days



Example 4-3-5:

▶ Find the number of days from 3rd May 2022 to 13th September 2022.

Solution: $T_1 = 13$ Sep From Timetable = 256 days

$T_2 = 3$ May From Timetable = 123 days

∴ N. of days = $256 - 123 = 133$ days

Time table

Day of month	31 Jan	28 Feb	31 Mar	30 Apr	31 May	30 Jun	31 Jul	31 Aug	30 Sep	31 Oct	30 Nov	31 Dec
1	1	32	60	91	121	152	182	213	244	274	305	335
2	2	33	61	92	122	153	183	214	245	275	306	336
3	3	34	62	93	123	154	184	215	246	276	307	337
4	4	35	63	94	124	155	185	216	247	277	308	338
5	5	36	64	95	125	156	186	217	248	278	309	339
6	6	37	65	96	126	157	187	218	249	279	310	340
7	7	38	66	97	127	158	188	219	250	280	311	341
8	8	39	67	98	128	159	189	220	251	281	312	342
9	9	40	68	99	129	160	190	221	252	282	313	343
10	10	41	69	100	130	161	191	222	253	283	314	344
11	11	42	70	101	131	162	192	223	254	284	315	345
12	12	43	71	102	132	163	193	224	255	285	316	346
13	13	44	72	103	133	164	194	225	256	286	317	347

Week 12 - Lesson 4.5

Finding Factors of S.I

Unit 4 : Simple Interest

Lesson 4.5 : Finding Factors of Simple Interest 120

15-27	Lesson 1.1,2,3 Reviw Numers (Write, Place , Round)	1
28 -32	Lesson 1.4 Money Currency System	
39-44	Lesson 2.1 System of Payment Lesson 2.2 Payroll by Hour & Week	2
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115-119	Lesson 4.3 Simple Interest (days- Counting Days) Lesson 4.4 Exact and Trade Interest	
120-125	Lesson 4.5 Finding Factors of Simple Interest	

4

Learning Objective

By the end of this unit, the student should be able to:

- ▶ recognize the concept of interest.
- ▶ identify the concept of time value of money.
- ▶ explain the different types of the simple interest.
- ▶ identify the method of calculating Simple Interest for various periods
- ▶ identify the method of calculating trade & exact simple interest.



Example 4-5-1:

- Salman wanted to borrow some money to expand his business. He was told he could borrow a sum of money for 18 months at 6% simple interest per year. He thinks he can afford to pay as much BHD540 in interest charges. How much money could he borrow?

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

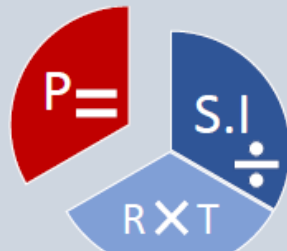
$$= \frac{540}{6\% \times 1.5} = \text{BHD}6,000$$

$$SI = P \times R \times T$$

$$540 = P \times 6\% \times 1.5$$

$$540 = P \times 0.09$$

$$P = \frac{540}{0.09} = \text{BHD } 6,000$$



Find the unknown factors the following:

No	P	T	R	SI	A
A	\$540	Four years	4¼%	\$??	\$??
B	BHD??	10 Months	6%	BHD 155	BHD??
C	KD5900	??? days	5%	KD??	KD6018
D	BHD2000	One year & six months	3.75%	BHD??	BHD2112.500

Example 4-5-2:

- The owner of a restaurant borrowed BHD1,800 for 1.5 years to buy a food preparation table for his restaurant. If he paid BHD202.500 simple interest on the loan. What rate of interest did he pay?

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

$$= \frac{202.500}{1,800 \times 1.5} \times 100 = 7.5\%$$

$$SI = P \times R \times T$$

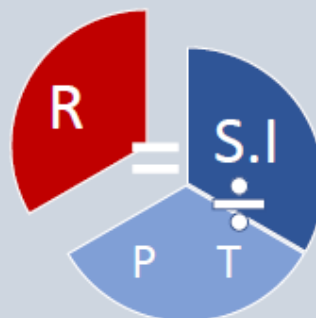
$$202.500 = 1,800 \times R \times 1.5$$

$$202.500 = R \times 2,700$$

$$R = \frac{202.500}{2,700}$$

$$R = 0.075 \times 100$$

$$R = 7.5\% \text{ annually}$$



Example 4-5-3:

- Hamad borrowed BHD2,400 at 7% simple interest per year to buy a new computer for his business. If he paid BHD420 interest, what was the duration (time) of the loan?

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

$$= \frac{420}{2,400 \times 0.07} = 2.5 \text{ years}$$

$$SI = P \times R \times T$$

$$420 = 2,400 \times 7\% \times T$$

$$420 = 168 \times T$$

$$T = \frac{420}{168} = 2.5 \text{ years}$$



*Thank you all We wish you good
luck*