CH 1

Financial Mathematics

(workbook)

Goal:..............
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Student Name : ……………………………………………….

Student ID : ……………………………………………….

Class : ……………………………………….

الخطة الدراسية

KINGDOM OF BAHRAIN
Ministry of Education
وزارة التربية والتعليم

المسار : توحيد المسارات والتعليم الفني والمهني	المادة /اسم المقرر ورمزه: رياضة مالية مال 111 – مال 805
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المستوى الثالث (التعليم الفني والمهني)	

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الطبعة المعتمدة: 2022م

1.1 Write the Whole Numbers

Suppose you are in sales meeting and the marking manager presents a report of the sales for the previous quarter, the projected sales for the current quarter, and the projected sales for the entire year, how would you record these figures in the notes you are taking for the meeting? You will need to have a mental picture of the place-value structure of our number system.

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
0.0000001	Hundred- Millionths

1. **Write the word name for these numbers:**

number	word
a) 150	
b) 8921	
c) 1085514	
d) 40.451	
e) BD 0.025	
f) 8.15	
g) 1225.4211	
h) BD 516800	
i) BD 762.150	
j) $ 175.64	

2. **Write the number of the following:**

Word	number
a) Twenty billion, fifteen million, two hundred forty.	
b) Ten billion, five hundred forty-two million, six hundred thousand.	
c) Eight and tenths.	
d) Five hundred thirty-nine thousandths.	
e) One hundred thirty-seven and twenty-three-hundredths.	

1.2 Place Value and Number System

Our system of numbers, the decimal-number system, uses ten symbols called digits: 0,1, 2, 3, 4, 5, 6, 7, 8, 9, numbers in the decimal system can have one or more digits. Each digit in a number that contains two or more digits must be arranged in a specific order to have the value we intend for the number to have, one set of numbers in the set of whole numbers: 0, 1, 2, 3, 4.

Most business calculation involving whole numbers include one or more of four basic mathematical operations: addition, subtraction, multiplication and division.

Reading number is based on an understanding of the place-value system that is part of our decimal-number system. The figure below shows that system applied to the number

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

Exercises 1-2-1:

1-   Find the place value of the following numbers:

a-   56,326

b-   8,971,456

c-   16,080,573

d-   789,454,002

e-   3,765,010,783

f-   54,079,887,546

g-   200,471,050,120

h-   4,156,966,432,251

i-   80,879,674,366,377

j-   100,025,912,706,454

	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 100	Ten	One 1
a															
b															
c															
d															
e															
f															
g															
h															
i															
j															

b- Decimals and the place-value system

Decimals are another way to write fractions. We use decimals in some form every day. Even our money system is based on decimals. Calculators use decimals, and decimals are the basis of percentages, interest, markup, and markdowns.

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

► **Find the place value of the following numbers:**

a-   326.0153

b-   8,670.451

c-   15,480.25

d-   6,450,872.125

	Millions			Thousands			Units			Decimal System					
	Hundred Million	Ten Million	Million	Hundred thousand	Ten Thousand	Thousand	Hundred 100	Ten	One 1	Decimal point	Tenths	Hundredths	Thousandths	Ten-thousandths	Hundred-thousandths
a															
b															
c															
d															

Exercises 1-3-1:

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 100	Ten	One 1

1.3 Round Whole Number

In the business world and in real life situations, sometimes we want to round numbers. The rounded number is an approximate number that is obtained from rounding an exact amount.

So often rough or rounded figures are used. A rounded number is not an exact amount. It is an approximate number instead. Rounding a number to a specific place, which may be the first left in a number.

a.   Find the digit in the specified place (first dignitaries, ten, hundred, thousand etc.).

b.   Look at the next digit to the right

►   If this digit is less than 5, place it and all digits to its right with zeros.

Exercises 1-3-2:

►   **Round the following numbers:**

a)   3,784.921 to the nearest **thousand**. (………………………………………………..)

b)   52,973 to the nearest **hundred**. (………………………………………………..)

c)   6.098 to the nearest **ten**. (………………………………………………..)

d)   29,000,459 to the **first digit**. (………………………………………………..)

e) $493.9126 to nearest **dollar**. (………………………………………………..)

f)   42.3784 to the nearest thousand. **(** ………………………………………………..)

- **Remember that :**
✦ If this digit is more than 5, add 1 to the digit in the specified place with zeros.
✦ If this digit is less than 5, replace it and all digits to its right with zeros.

خاص بالمعلم								خاص بالطالب	
التعزيز	التطوير				التقدير			ملاحظات	ماهو رأيك في درسنا لهذا اليوم
	ناقش زملائك	اكمل الاسئلة	تدرب أكثر	راجع الكتاب	تحتاج الى دعم	متمكن	جيد	ممتاز		☺ ☺ ☹
	☐	☐	☐	☐	☐	☐	☐	☐		☐ ☐ ☐

1.4 Money and the Currency System

✦ **Centesimal System -** this is a system with a unit of currency that is equivalent to 100 smaller units. For example, there are 100 halala in a Saudi Riyal and 100 cents in a One-dollar US. Most countries use this system.

✦ **Millesimal System -** this is a system with a unit of currency equivalent to 1,000 smaller units. For example, the Bahraini Dinar is divided into 1,000 Fils. A few countries use this system.

Rate of Exchange:

Foreign Currency		Selling BHD	Buying BHD
USA Dollar	USD	0.378000	0.375000
Euro	EUR	0.449100	0.466600
Japanese Yan	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
Jordanian Dinar	JOD	0.531800	0.531800

Exercises 1-4-2:

1-Use the above currency exchange table in the following currency conversion:

a)   You have BHD 250 and would like to convert it to Euro.

....
....
....
....

BHD ....
.... ✗ 1
....

b)   You have MYR 7,500 and you want to get the Bahraini dinar.

....
....
....
....

BHD ....
.... ✗ 1
....

c)   Manal has KWD 950 and she wants to convert it into USA Dollar.

....
....
....
....

BHD ....
.... ✗ 1
....

....
....
....
....

BHD ....
.... ✗ 1
....

2-   £1,000 to BHD   if the rate of exchange is (£1 = BD0.536).

....
....
....
....

BHD ....

.... ✗ 1

....

3-   BHD1,500 to EURO if the rate of exchange is (1 Euro = BD0.474).

....
....
....
....

BHD ....

.... ✗ 1

....

Foreign Currency		Selling BHD	Buying BHD
USA Dollar	USD	0.378000	0.375000
Euro	EUR	0.449100	0.466600
Japanese Yan	JPY	0.003632	0.363500
Chinese Yuan Renminbi	CNY	0.058267	0.056451
British Pound	GBP	0.524150	0.506650
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Thai Baht	THB	0.011938	0.108792
Malaysian Ringgit RM	MYR	0.099942	0.084192
Saudi Arabian Riyal	SAR	0.100650	0.100000
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Jordanian Dinar	JOD	0.531800	0.531800

خاص بالمعلم								خاص بالطالب		
التعزيز	التطوير			التقدير				ملاحظات	ماهو رأيك في درسنا لهذا اليوم	
	ناقش زملاءك	اكمل الأسئلة	تدرّب أكثر	اراجع الكتاب	أحتاج الى ذلك	متوسط	جيد	ممتاز		☺ ☻ ☹	
	☐	☐	☐	☐	☐	☐	☐	☐		☐ ☐ ☐	

General Questions page (33)

Q1 : Write the word name for these numbers:

Number	word
a) 4830	
b) 51.860	
c) 6.75	
d) BD 732600	
e) $ 195.51	

Q2 : Write the number of the following:

Word	number
a) Five billion, fifteen million, two hundred six.	
b) Two billion, three hundred thirty -two million, four hundred thousand.	
c) One and tenths.	
d) Twenty hundred forty-seven thousandths.	
e) Eight hundred thirty- nine and twenty-five - hundredths.	

Q3 : Find the place value of the following numbers:

a) 45,097,660,352
b) 600,852,060,230
c) 5,191,444,37,750
d) 60,654,897,753,235
e) 300,035,612,502,759

	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 100	Ten	One 1
a															
b															
c															
d															
e															

Q4 : Find the place value of the following numbers:
a- 16,480.75
b- 8,450,872.135

	Millions			Thousands			Units			Decimal System					
	Hundred Million	Ten Million	Million	Hundred thousand	Ten Thousand	Thousand	Hundred 100	Ten	One 1	Decimal point	Tenths	Hundredths	Thousandths	Ten-thousandths	Hundred-thousandths
a															
b															

Q5: Round the following numbers:

a) 29,000,459 to the first digit. **(** ……………………………………………….. **)**

b) $493.9126 to nearest dollar. **(** …………………………………………….. **)**

c) 42.3784 to the nearest thousand. **(** …………………………………………….. **)**

Q6: Convert by using draft rate, which you can get it from today's newspaper:

► BHD 4,620 to MYR

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

BHD	……………
…………… $\times$	1
…………… ……………	

► JPY 789 to BHD

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

BHD	……………
…………… $\times$	1
…………… ……………	

► CNY 98440 to EUR

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

BHD	……………
…………… $\times$	1
…………… ……………	

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

……………………………………………………………………………

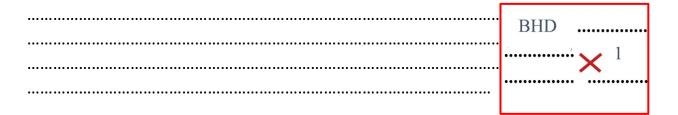| BHD	……………
…………… $\times$	1
…………… ……………	

Q7 : Use the daily exchange rate in the following currency conversion:

a) Change BHD1,250 to if the rates of exchange are (EP£ 1=BD0.080).

....
....
....
....

BHD ....
.... $\times$ 1
....

b) Bahraini family decided to travel to Kuwait. They need to change BHD 2,000 to KD. Find the amount they will get If the rate of exchange.

....
....
....
....

BHD ....
.... $\times$ 1
....

c) Sara Ali wants to send BHD 500 to her sister, which she learns in London as draft. How many pounds sterling did she send to her sister if the exchange rate transfer rate?

....
....
....
....

BHD ....
.... $\times$ 1
....

Q8 : Fahad converted BHD 5,000 into Emirati Dirham to buy a car from Dubai, but he did not buy the car, and after returning to Bahrain, he converted the amount intoBahraini dinars. How much did Fahad lose?

....
....
....
....

BHD ....
.... ✕ 1
....

....
....
....
....

BHD ....
.... ✕ 1
....

Fahad lose BD ………………………………………………………….

End 😊

9Q: Use the following link to answer the questions:

The number 9530 in letters is :

○ ninety thousand, five hundred thirty.

○ nine thousand, five hundred thirty.

○ nine thousand, five hundred three.

The number 10152863 in letters is :

○ Ten million, one hundred five two thousand, eighty hundred sixty three

○ Ten million, one hundred fifty two thousand, eight hundred six three

○ Ten million, one hundred fifty two thousand, eight hundred sixty three

The number BHD 731.500 in letters is :

○ seven hundred thirty-one BHD and five hundred fils.

○ seven hundred thirty-one BHD, five hundred fils.

○ seven hundred three-one BHD and five hundred fils.

The number of million, six hundred ninety thousand, four hundred eleven and six six-tenths is:

○ 5690411.06

○ 5690411.6

○ 5690411.006

Round 5657 to the nearest hundred.

○ 5700

○ 5600

○ 5650

Round 42,548 to first digit:

○ 40.548

○ 40,000

○ 43,000

Round 86.11232 to the nearest hundredths.

○ 86.000

○ 86.12

○ 86.11

a)   BHD 296.25984 to the nearest fils.

○ BHD 296.259

○ BHD 296.260

○ BHD 296.200

You have **BHD 800** Bahraini Dinars and would like to convert it to **EUR =€.......**
  (Selling BHD 0.449100)
  (Buying BHD 0.466600)

○ €359.28

○ €1714.53

○ €1781.34

After you return from travel, you have THB 8500 Thai Baht and you want to get the Bahraini dinar.

Foreign Currency		Selling BHD	Buying BHD
USA Dollar	USD	0.378000	0.375000
Euro	EUR	0.449100	0.466600
Japanese Yan	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

○ BHD 924.732

○ BHD 1014.730

○ BHD 78130.745

Convert **CNY 10500** to **British Pound**.

Foreign Currency		Selling BHD	Buying BHD
USA Dollar	USD	0.378000	0.375000
Euro	EUR	0.449100	0.466600
Japanese Yan	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

○ BD1130.851

○ BD1207.547

○ BD97492.959