ENGLISH – YORÙBÁ

MATHEMATICS

ÌWÉ-IṢẸ́ ÌKỌ́NI NÍ ÌṢIRÒ

L'ÉDÈE YORÙBÁ

TRAINING

WORKBOOK

KAYODE J. FAKINLEDE

YORUBA ALPHABETS

ÀWỌN ABIDI

A B D E Ẹ F G GB H I J K L M N O Ọ P R S Ṣ T U W Y

a b d e ẹ f g gb h i j k l m n o ọ p r s ṣ t u w y

SIGNS ON THE YORUBA ALPHABETS
ÀWỌN ÀMÌN-ORÌ ABIDI YORÙBÁ

SUPPLIED BY ALT-I

A À Á È E É Ẹ Ẹ́ Ẹ̀ Ì I Í Ò O Ó Ọ Ọ́ Ọ̀ Ù U Ú

à a á è e é ẹ ẹ́ ì i í ò o ó ọ ọ́ ù u ú ṣ

SIMPLE WRITING RULES FOR MATHEMATICS, SCIENCE AND TECHNOLOGY

1. All monosyllabic words must be accented. Avoid using monosyllabic words by forming compound words from them and the object.
2. Disyllabic words of common usage do not need to be accented. If there is any ambiguity as to meaning, the second syllable of such words can be accented, leaving the first syllable alone. This second syllable leads the reader as to the meaning of such a word. At the extreme, accent both syllables.
3. The diacritics under the letters ṣ, ẹ, and ọ, are integral parts of those letters. They cannot be omitted.
4. Names of persons and places exceeding two syllables do not need to be accented. These should be learned as they appear.
5. All words, within a sentence structure, of three or more syllables do not need to be accented.

ÀWỌN ÀPẸRẸ / EXAMPLES

FÚN: /FOR:	ÌTÚM Ọ̀ / MEANING:	LO: /USE:
Ṣe àròpọ̀	Add	**Ṣaropọ̀**
Ṣe àyọ̀kúrò	Subtract	**Ṣayọ̀kuro**
Ṣe ìsọdipúpọ̀	Multiply	**Ṣesọdipupọ̀**
Ṣe pínpín	Divide	**Ṣepinpin**
Ṣe àtúnkọ	Rewrite	**Ṣatunkọ**
Ṣe àtúnṣe	Correct	**Ṣàtúnṣe**
Ṣe àlàyé	Explain, Express	**Ṣalaye**
Ṣe àpẹẹrẹ	Give an example	**Ṣapẹẹrẹ**
Ṣe àkọ̀júwe	Give an illustration	**Ṣakọ̀juwe**
Ṣe àpèjúwe	Say (cite) an example	**Ṣapejuwe**
Ṣe àkọsílẹ̀	Write down	**Ṣakọsilẹ̀**
Ṣe àyàjúwe	Draw an example/illustration	**Ṣayajuwe**
Ṣe ìṣirò	Calculate	**Ṣeṣiro**
Ṣe àdàkọ	Copy	**Ṣadakọ**
Ṣe àròpín	Find the average of	**Ṣaropin**
Sọ di ríro	Simplify	**Sọdiriro**
Ṣe ojútùú (ìyọnu)	Solve (a problem)	**Ṣojutuu (ìyọnu)**
Ṣe àṣewò (ìyọnu)	Attempt (a problem)	**Ṣaṣewo (ìyọnu)**
Ṣe ìparí	Complete	**Ṣepari**
Ṣe ìrọpò (pẹ̀lú)	Replace (with or by)	**Ṣerọpo pẹ̀lú**
Ṣe àyípadà	Change	**Ṣayipada**
Ṣe ètò	Organize, Arrange, List	**Ṣeto**
Ṣe àtúntò	Rearrange	**Ṣatunto**
Ṣe ìbùpín	Find the ratio of	**Ṣebupin**
Ṣe ìdáhùn	Give answers(s) or response to	**Ṣedahun**
Fi ojú wọn	Estimate	**Fojuwọn**
jẹ́ iyekan	Is the same value as	**Jẹyekan**
Pẹ iye kan pẹ̀lú	Is approximately the same value as	**Pẹyekan pẹ̀lú**

MATHEMATICAL SYMBOLS

MATHEMATICAL SYMBOLS	ÀWỌN ÀMÌN FÚN ÌṢIRÒ
USING SYMBOLS	LÍLO ÀWỌN ÀMÌN
SIGN	ÀMÌN

SIGN/ ÀMÌN	NAME OF SIGN/ ORÚKỌ ÀMÌN	EXAMPLE/ ÀPẸRẸ	EXPLANATION	ÀLÀYÉ
=	**EQUALITY** **ÌJẸ́YEKAN**	**A = B**	**A** equals **B**	**A** jẹyekan pẹ̀lú **B** *tàbí* **A** jẹ́ **B** *tàbí* **A** àti **B** jẹyekan
~	**SIMILARITY** **ÌB ÁRAJỌ**	**A ~ B**	**A** is similar to **B**	**A** bá **B** jọ *tàbí* **A** ati **B** bárajọ
≅	**APPROXIMATION** **ÌPẸ́RA**	**A ≅ B**	**A** is approximately equal to **B** **A** is not equal to **B** but it is almost the same as **B**	Iye **A** pẹ iye **B**. **A** kìí ṣe iyekan pẹ̀lú **B**, ṣùgbọn ó pẹ iye **B**.
≠	**INEQUALITY** **AÌJẸ́YEKAN**	**A ≠ B**	**A** is not equal to **B**	**A** kò jẹ́ iyekan pẹ̀lú **B** *tàbí* **A** kò jẹ́ **B**
+	**ADDITION** **Ì RÒPỌ̀**	**A + B**	Add A to B *or* Add B to A	Ro **A** àti **B** pọ *tàbí* Ro **B** ati **A** *tàbí* Ṣàròpọ **A** àti **B**
-	**SUBTRACTION** **ÌYỌKÚRÒ**	**A – B**	Subtract B from A	Yọ **B** kúrò ní **A** *tàbí* Ṣàyọkúrò **B** nínu **A**
x	**MULTIPLICATION** **ÌSỌDIPÚPỌ̀**	**A x B**	Multiply A with B *or* Multiply B with A	Sọ A di púpọ pẹ̀lú **B** *tàbí* Sọ **B** di púpọ pẹ̀lú **A** *tàbí* Ṣèsọdipúpọ̀ **A** pẹ̀lú **B**
>	**BIGGER THAN** **ÌTÓBIJÙ**	**A>B**	**A** is bigger than **B**. No matter how small **A** may be, it is bigger than **B**	**A** tóbi ju **B**. Bótiwù kí **A** kéré tó, ó tóbi ju **B** lọ
<	**SMALLER THAN** **ÌKÉRÉJÙ**	**A<B**	**A** is smaller than **B**. No matter how big **A** may be, it is smaller than **B**	**A** kéré ju **B**. Bótiwù kí **B** kéré tó, ó tóbi ju **A** lọ
≥	**BIGGER THAN OR EQUAL TO** **ÌKÉRÉDÉ**	**A≥B**	**A** is bigger than *or* equal to **B**. No matter how small **A** may be, it is not smaller than **B**	**A** kéré dé **B**. Bótiwù kí **A** kéré tó, kò kéré ju **B** lọ. *(B ni òpin kíkérée A)*
≤	**SMALLER THAN OR EQUAL TO** **ÌTÓBIDÉ**	**A≤B**	**A** is smaller than *or* equal to **B**. No matter how big **A** may be, it is not bigger than **B**	**A** tóbi dé **B**. Bótiwù kí **A** tóbi tó, kò tóbi ju **B** lọ. ***(B ni òpin títóbi A)***

CONTENTS

MODULE 1

NUMBERS AND COUNTING
ÀWỌN ÒÒKÀ ATI ÒÒKÀ-KÍKÀ

NUMBERS	**ÀWỌN ÒÒKÀ**
NUMERALS	**ÀWỌN ÒNKÀ**
COUNTING	**ÒÒKÀ-KÍKÀ**

REVIEW OF NUMBERS

YORUBA DECIMAL SYSTEM

YORUBA DECIMAL SYSTEM	**ÀWỌN ÒÒKA YORUBA TI IMỌN-JINLẸ**

	Unit	1	1	**Ẹyọ**	
	Ten	10	10^1	**Ìdì**	
	Hundred	100	10^2	**Ọrún**	
	Thousand	1000	10^3	**Ọkẹ**	
	Million	1,000,000	10^6	**Òdù**	
	Billion	1,000,000,000	10^9	**Èèrú**	
	Trillion	1,000,000,000,000	10^{12}	**Ọkẹ-èèrú**	**Ọkẹ x èèrú**
	Million Billion	1,000,000,000,000,000	10^{15}	**Òdù- èèrú**	**Òdù x èèrú**
	Billion Billion	1,000,000,000,000,000,000	10^{18}	**Èrèèrú**	**Èèrú x èèrú**

NUMERALS - NUMBERS UP TO 10

	BASIC	ADJECTIVE
0	Òdo, Òfo	Òdo, Òfo
1	Ení, Ọkan	kan
2	Èjì	Méjì
3	Ẹ̀ta	Mẹ̀ta
4	Ẹ̀rin	Mẹ̀rin
5	Àrún	Márun

	BASIC	ADJECTIVE
6	Ẹ̀fà	Mẹ̀fà
7	Èje	Méje
8	Ẹ̀jọ	Mẹ̀jọ
9	Èsán	Mẹ̀san
10	Ẹ̀wá	Mẹ̀wa or onídì kan

ÌWÉ-IṢẸ́ ÌKỌ́NI NÍ ÌṢIRÒ L'ÉDÈE YORÙBÁ

NUMBERS UP TO 20

	BASIC	ADJECTIVE
10	Ọ̀kan ìdì	Ọlọkan-ìdì
11	Ọ̀kan-ìdì lékan *tàbí* ìdìlékan	Ọlọkan-ìdì lé kan *tàbí* onídìlékan
12	Ọ̀kan-ìdì léji *tàbí* ìdìléji	Ọlọkan-ìdì léjì *tàbí* onídìléjì
13	Ọ̀kan-ìdì lẹ́ta *tàbí* ìdìl'ẹ́ta	Ọlọkan-ìdì lẹ́ta *tàbí* onídìl'ẹ́ta
14	Ọ̀kan-ìdì lẹ́rin *tàbí* ìdìlẹ́rin	Ọlọkan-ìdì lẹ́rin *tàbí* onídìlẹ́rin

	BASIC	ADJECTIVE
15	Ọ̀kan-ìdì lárun *tàbí* ìdìlárun	Ọlọkan-ìdì lárun *tàbí* onídìl'árun
16	Ọ̀kan-ìdì lefa *tàbí* ìdìl'ẹ́fa	Ọlọkan-ìdì lẹ́fa *tàbí* onídìlẹ́fa
17	Ọ̀kan-ìdì léje *tàbí* ìdìléje	Ọlọkan-ìdì leje *tàbí* onídìléje
18	Ọ̀kan-ìdì lẹ́jọ *tàbí* ìdìlẹ́jọ	Ọlọkan-ìdì lẹ́jọ *tàbí* onídìlẹ́jọ
19	Ọ̀kan-ìdì lẹ́san *tàbí* ìdìlẹ́san	Ọlọkan-ìdì lẹ́san *tàbí* onídìlẹ́san
20	Èjì-ìdì	Eléjì-dì

NUMBERS UP TO 1000

	ENGLISH	YORUBA
10	Ten	Ọ̀kan ìdì (ẹ́wá)
20	Twenty	Èjì-dì (*Èjì ìdì*)
30	Thirty	Ẹ̀ta-dì (*ẹ́ta ìdì*)
40	Forty	Ẹ̀rin-dì (*ẹ́rin ìdì*)
50	Fifty	Àrún-dì (*Àrún ìdì*)
60	Sixty	Ẹ̀fà-dì (*ẹ́fà ìdì*)
70	Seventy	Èje-dì (*Èje ìdì*)
80	Eighty	Ẹ̀jọ-dì (*ẹ́jọ ìdì*)
90	Ninety	Ẹ̀sán-dì (*ẹ́sán ìdì*)
100	One Hundred	Ọ̀kan Ọ́rún

	ENGLISH	YORUBA
100	One Hundred	Ọ̀kan ọ́rún
200	Two Hundred	Èjì ọ́rún
300	Three Hundred	Ẹ̀ta ọ́rún
400	Four Hundred	Ẹ̀rin ọ́rún
500	Five Hundred	Àrún ọ́rún
600	Six Hundred	Ẹ̀fà ọ́rún
700	Seven Hundred	Èje ọ́rún
800	Eight Hundred	Ẹ̀jọ ọ́rún
900	Nine Hundred	Ẹ̀sán ọ́rún
1000	One Thousand	Ọ̀kan ọ́kẹ́

LARGE NUMBERS

	ENGLISH	**YORUBA**
10,000	Ten Thousand	Ọ̀kan-ìdì ọ́kẹ́ *tàbí* ìdì ọ́kẹ́
20,000	Twenty Thousand	Eji-ìdì ọ́kẹ́
100,000	One hundred Thousand	Ọ̀kan ọ́rún ọ́kẹ́
300,000	Three hundred Thouisand	Ẹ̀ta ọ́rún ọ́kẹ́
1,000,000	One Million	Ọ̀kan òdù
10,000,000	Ten Million	Ọ̀kan-Ìdì òdù
1,000,000,000	One Billion	Ọ̀kan Èèrú
20,000,000,000	Twenty Billion	Èji-ìdì èèrú
100,000,000,000	One Hundred Billion	Ọ̀kan ọ́rún èèrú
1,000,000,000,000	One Trillion	Ọ̀kan ọ́kẹ́ èèrú (ọ́kẹ́èrú)
100,000,000,000,000	One Hundred Trillion	Ọ̀kan ọ́rún ọ́kẹ́ èèrú (Ọ́rún ọ́kẹ́èrú)
1,000,000,000,000,000	One Quadrillion	Ọ̀kan Òdù èèrú
10 exp.18	One thousand quadrillion	Èrèèrú

ÀWỌN ÀPẸRẸ /EXAMPLES:
97: Ninety Seven is **ẹsan-ìdi l'éje**

997: Nine Hundred and Ninety Seven / **Ẹ̀sán ọrún at'ẹsán-ìdì l'éje**

8,997: Eight thousand, nine hundred and ninety seven / **Ẹ̀jọ ọkẹ, ẹsán ọrún at'ẹsán ìdì l'éje**

10,247: Ten Thousand, two hundred and forty seven / **(Ọ̀kan) ìdì ọkẹ, eji ọrún at' ẹrin-ìdì l'éje**

10,203,047: Ten million, two hundred and three thousand, and forty seven **/ (Ọ̀kan) ìdì òdù, èjì ọrún l'ẹta ọkẹ, at'ẹrin-ìdì l'éje)**

ÀṢEWÒ 1/ EXERCISE 1
Kọ àwọn yi ní òòkà: Write in numbers

1.	Èji-dì l'ẹta	23	**10.**	Ẹ̀rin-di l'ẹrin	
2.	Ẹ̀sán-dì l'ẹrin		**11.**	Ìkan-idi l'ẹsán	
3.	Ẹ̀ta-dì l'éji		**12.**	Arun-dì l'arun	
4.	Ẹ̀jọ-dì l'ẹta		**13.**	Ẹ̀san-dì l'ẹrin	
5.	Ẹ̀rin-dì l'ẹfa		**14.**	Èje-dì l'ẹta	
6.	Èje-dì l'ẹsán		**15.**	Ẹ̀ta-dì l'arun	
7.	Àrún-dì lé kan		**16.**	Ẹ̀rin-dì	
8.	Ẹ̀fà-dì l'éji		**17.**	Ẹ̀fà-dì l'árun	
9.	Eji-dì l'ẹjọ		**18.**	Ìkan-idi l'eje	

ÀṢEWÒ 2/ EXERCISE 2
Ṣàtunkọ àwọn òòkà yi ní ètò titobisi: Rewrite in ascending order :

1.	71,74,70,72	70, 71, 72, 74	**6.**	63,61,59,57,55	
2.	38,36,34,37		**7.**	35,41,36,43,34,9	
3.	59,54.51,55		**8.**	49,29,79,19,39,69	
4.	96,93,98,89,88		**9.**	75,55,65,25,85	
5.	84,83,81,80		**10.**	91,89,94,86,92,80	

ÀṢEWÒ 3/ EXERCISE 3

Kọ òòkà tó péjú sí àwọn àlàfo yii: Put correct numbers in spaces provided:

1	Ninu 7 ati 8			4	Ninu 79 ati 98		
	7	Kéré ju	8			Kéré ju	
	8	Tóbi ju	7			Tóbi ju	
2	Ninu 35 ati 57			5	Ninu 97 ati 95		
		Kéré ju				Kéré ju	
		Tóbi ju				Tóbi ju	
3	Ninu 26 ati 19			6	Ninu 67 ati 97		
		Kéré ju				Kéré ju	
		Tóbi ju				Tóbi ju	

ÀṢEWÒ 4/ EXERCISE 4

Kọ àwọn òòkà yi ní ọrọ (Write these numbers in words)

1.	73	Èje-dì l'ẹta
2.	56	
3.	37	
4.	28	
5.	84	
6.	95	
7.	66	
8.	44	
9.	78	
10.	25	
11.	67	
12.	88	
13.	93	
14.	14	
15.	59	

ÀṢEWÒ 5/ EXERCISE 5

Kọ àwọn òòkà tó sọnu si àyè wọn (Fill in the missing numbers)

1.	1				5		7			10
2.	11	12				16		18		
3.		22			25	26		28		
4.			33	34			37		39	
5.	41			44		46		48		
6.			53				57	58		
7.				64		66		68	69	
8.	71			74			77			80
9.			83			86			89	90
10.		92			95	96			99	

ÀṢEWÒ 6/ EXERCISE 6

Kọ òòkà tó ṣáájú àwọn òòkà yi (Write the number before each of these numbers)

5	6	14	76	65	49
	34	72	27	32	80
	17	44	6	8	

ÀṢEWÒ 7/ EXERCISE 7

Kọ òòkà tó tẹlé àwọn òòkà yi (Write down the numbers after these numbers)

7	8	25	14	62	24
71		37	75	82	95
39		46	66	17	

MODULE 2

EVEN AND ODD NUMBERS
ÀWỌN ÒÒKÀ ONÍ-ÌLÀJÌ ATI ÒÒKÀ ÀÌNÍ-ÌLÀJÌ

EVEN AND ODD NUMBERS	**ÀWỌN ÒÒKÀ ONÍ-ÌLÀJÌ ATI ÀÌNÍ-ÌLÀJÌ**
EVEN: 2,4,6,8,,…	**ONÍ-ÌLÀJÌ: 2,4,6,8,…**
ODD: 1,3,5,7,…	**ÀÌNÍ-ÌLÀJÌ: 1,3,5,7,…**

An **odd number** is an **integer** which is not a multiple of two (2). If it is divided by two, the result is a fraction. For example: 1,3,5,7,9,11,13 An even number is a whole number that is a multiple of 2. If an even number is divided by two, the result is another whole number. For example: 2,4,6,8,10,12	Àwọn **òòkà àìní-ìlàjì** jẹ́ àwọn **òòkà** tí a kò leè pín sí méjì odindi. Bí a bá pin wọn sí méjì, ìpín wọn yóò ní ẹ̀ṣẹ (fractions) nínú. Fún àpẹrẹ: 1,3,5,7,9,11,13 Àwọn òòkà oní-ìlàjì jẹ́ àwọn ti a lè pin si méjì odindi. Bí a bá pín wọn si méjì, ìpín wọn yóò jẹ́ òòkà odindi míran. Fún àpẹrẹ: 2,4,6,8,10

ÀṢEWÒ 1/ EXERCISE 1

Kọ àwọn òòkà oní-ìlàjì tó sọnù sí àyè wọn (Fill in the blank spaces with the correct even numbers):

2	4	6		10	12	14	16				24
	28				36				44		48

ÀṢEWÒ 2/ EXERCISE 2

Kọ àwọn òòkà àìní-ìlàjì tó sọnù sí àyè wọn (Fill in the blank spaces with the correct odd numbers):

1		5	7			13			21
23		27		31		35		39	

ÀṢEWÒ 3/ EXERCISE 3

Tọka sí àwọn òòkà-àìní-ìlàjì (Identify the odd numbers):

A	1	2	3	4	5	6
B	7	8	9	10	11	12

C	18	19	20	21	22	23
D	41	44	47	50	53	

ÀṢEWÒ 4/ EXERCISE 4

Tọka sí àwọn òòkà-oní-ìlàjì (Identify the even numbers):

A	4	5	6	7	8	9
B	10	11	12	13	14	
C	66	77	88	99		
D	25	30	35	40	50	

ÀṢEWÒ 5/ EXERCISE 5

Kọ gbogbo àwọn òòkà àìní-ìlàjì láti 11 dé 50 (Write all the odd numbers between 11 and 50):

MODULE 3

PRIME NUMBERS
ÀWỌN ÒÒKÀ ÀÌNÍ-ÌFIPÍN

PRIME NUMBERS	**ÀWỌN ÒÒKÀ ÀÌNÍ-ÌFIPÍN**
FACTOR	**ÌFIPÍN**
HIGHEST PRIME FACTOR	**ÌFIPÍN NLÁ**
FAMILY TREE	**IGI ÌDÌLÉ**
COMMON FACTOR	**ÌFIPÍN ÀJỌNÍ**

	A prime number is that which can be divided only by 1 and itself: The factors of 7 are only1 and 7 The factors of 53 are only1 and 53	Òòkà àìní-ìfipín jẹ́ èyi tí a lè fi 1 àti ara rẹ nikan pín: Àwọn ìfipín 7 jẹ́ 1 ati 7 nikan Àwọn ìfipín 53 jẹ́ 1 ati 53 nikan

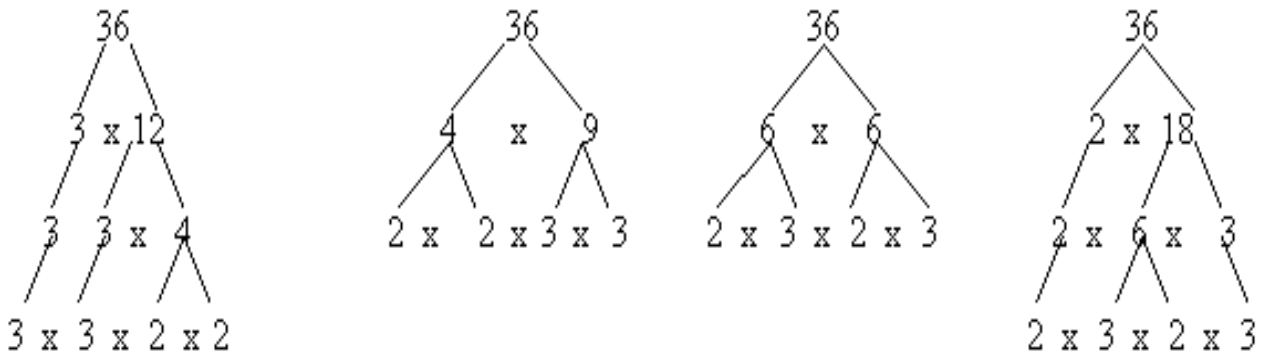
ÀLÀYÉ 1/ EXPLANATION 1

Draw a hundred square chart	Ya itẹ-nla oni oju-itẹ 100
Cross out the number 1	Fagilé òòkà 1
Leave the number 2, but cross out all multiples of 2	Fi òòkà 2 síle, ṣùgbọn fagile àwọn òòkà tó jẹ́ ẹsún ìfipín 2
Leave the number 3, but cross out all multiples of 3	Fi òòkà 3 síle, ṣùgbọn fagilé àwọn òòkà tó jẹ́ ẹsún Ìfipín 3
Leave the number 5, but cross out all multiples of 5	Fi òòkà 5 síle, ṣùgbọn fagilé àwọn òòkà tó jẹ́ ẹsún Ìfipín 5
Leave the number 7, but cross out all multiples of 7	Fi òòkà 7 síle, ṣùgbọn fagilé àwọn òòkà tó jẹ́ ẹsún ìfipín 7
All other numbers that have not been crossed out (red) are prime numbers	Àwọn òòkà tó kù tí a kò fagilé (pupa) ni a npè ní òòkà àìní-ìfipín

~~1~~	2	3	~~4~~	5	~~6~~	7	~~8~~	~~9~~	~~10~~
11	~~12~~	13	~~14~~	~~15~~	~~16~~	17	~~18~~	19	~~20~~
~~21~~	~~22~~	23	~~24~~	~~25~~	~~26~~	~~27~~	~~28~~	29	~~30~~
31	~~32~~	~~33~~	~~34~~	~~35~~	~~36~~	37	~~38~~	~~39~~	~~40~~
41	~~42~~	43	~~44~~	~~45~~	~~46~~	47	~~48~~	~~49~~	~~50~~
~~51~~	~~52~~	53	~~54~~	~~55~~	~~56~~	~~57~~	~~58~~	59	~~60~~
61	~~62~~	~~63~~	~~64~~	~~65~~	~~66~~	67	~~68~~	~~69~~	~~70~~
71	~~72~~	73	~~74~~	~~75~~	~~76~~	~~77~~	~~78~~	79	~~80~~
~~81~~	~~82~~	83	~~84~~	~~85~~	~~86~~	~~87~~	~~88~~	89	~~90~~
91	~~92~~	~~93~~	~~94~~	~~95~~	~~96~~	97	~~98~~	~~99~~	~~100~~

ÀLÀYÉ 2 / EXPLANATION 2

Prime factors can be found by drawing FAMILY TREES	A lè rí àwọn òòkà àìní-ìfipín bí a bá ya àwọn IGI ÌDÌLÈ



Whichever way you choose, you arrive at the same answer

Ọnàkọnà tá a le gbà, a óò ní èsì kan náà

36 = 3 x 3 x 2 x 2 = 2 x 2 x 3 x 3 = 2 x 3 x 2 x 3

Here, 36 is written as the products of its prime factors	A kọ 36 gẹgẹbí ẹsún àwọn òòkà àìní-ìfipín rẹ

ÀṢEWÒ 1/ EXERCISE 1

By drawing family trees, write these numbers as products of their prime factors:	**Nípa yíya àwọn igi ìdíle, kọ àwọn òòkà yi gẹgẹbí ẹsún àwọn òòkà àìní-ìfipín wọn:**

1. 12 **2.** 32 **3.** 36

4. 48 **5.** 35 **6.** 65

7. 22

8. 63

9. 81

ÀṢEWÒ 2/ EXERCISE 2

1.	Express 84 as prime factors	Ṣàlàyé 84 gẹgẹbi àwọn òòkà àìní-ìfipín	
2.	What is the product of the 3 smallest prime factors which are greater than 2?	Kini ẹsún àwọn òòkà àìní-ìfipín mẹta tó tẹlé 2	
3.	Use prime factors to find the HCF of 18, 12, 56	Fi òòkà àìní-ìfipín wá ìfipín nlá 18, 12, 56	
4.	What is the highest prime factor of 420	Kíni ìfipín nlá ti 420	
5.	Which prime number is a common factor of 12, 15, 18, 21, 27?	Kíni òòkà àìní-ìfipín tó jẹ́ ìfipín 12, 15, 18, 21, 27?	

MODULE 4

PLACE VALUE
IYE NÍPA IPÒ

PLACE VALUE					**IYE NÍPA IPÒ**			
Thousand	**Hundred**	**Ten**	**Unit**		**Ọkẹ**	**Ọrún**	**Ìdì**	**Ẹyọ**
1	**1**	**1**	**1**		**1**	**1**	**1**	**1**

EXAMPLE 1 **ÀPẸRẸ 1**

HUNDREDS, TENS, and UNITS	ỌRUN, ÌDÌ AT' ẸYỌ
H T U 3 6 6	Ọ I E 3 6 6
In the Abacus: The 3 under hundred means 3 hundreds or 300 the 6 under ten means 6 tens or 60 The 6 under unit means 6 units or 6 366	Ni ẹrọ ìṣirò: Eta tó wà lábẹ ọrún jẹ́ ọrún mẹta tàbí 300 ẹfà tó wà lábẹ ìdì jẹ́ ìdì mẹfà tàbí 60 Àrún tó wà lábẹ ẹyọ jẹ́ ẹyọ mẹfà tàbí 6 366

ÀṢEWÒ 1/ EXERCISE 1

For what number does each underlined figure stand?	**Irú ipò-òòkà wo ni àwọn òòkà tí a fagi sí ìdí rẹ wà?**

1. 7<u>1</u>9	Ọrùn	**5.** 73<u>9</u>		**9.** <u>8</u>40		**13.** 35<u>3</u>	
2. 60<u>2</u>		**6.** 37<u>4</u>		**10.** 1<u>5</u>1		**14.** 5<u>3</u>4	
3. 9<u>2</u>7		**7.** 6<u>4</u>7		**11.** 2<u>9</u>6		**15.** 64<u>5</u>	
4. <u>8</u>93		**8.** 2<u>5</u>5		**12.** 4<u>8</u>7		**16.** <u>8</u>56	

ÀṢEWÒ 2/ EXERCISE 2

Complete the following, For example:	**Parí àwọn yi.** Fún àpẹrẹ
In 837: 7 stands for 7 units or 7 3 stands for 3 tens or 30 8 stands for 8 hundreds or 800	Ni 837, 7 dúró fún ẹyọ 7 tàbí 7 3 dúró fún ìdì 3 tàbí 30 8 dúró fún ọrún 8 tàbí 800

1	Ni	954,	9	dúró	fún	Ọrún 9	4	dúró	fún	
2	Ni	459,	4	dúró	fún		9	dúró	fún	
3	Ni	746,	7	dúró	fún		4	dúró	fún	
4	Ni	362,	3	dúró	fún		2	dúró	fún	
5	Ni	235,	3	dúró	fún		2	dúró	fún	
6	Ni	763,	3	dúró	fún		6	dúró	fún	

ÀṢEWÒ 3/ EXERCISE 3

Read these numerals, and say how many hundreds, tens, and units there are in the number	**Ka àwọn òòkà yi, kí ẹ sì sọ iye ọrún, ìdì, àt'ẹyọ tó wà nínú òòkà kọọkan**

Ọ	**I**	**Ẹ**
3	8	2
4	4	3
5	0	4

Ọ	**I**	**Ẹ**
6	5	8
7	0	2
8	0	0

Ọ	**I**	**Ẹ**
9	1	1
6	8	2
7	9	4

Ọ	**I**	**Ẹ**
3	7	1
5	3	2
7	6	3

Ọ	**I**	**Ẹ**
3	4	7
4	0	1
7	1	1

Ọ	**I**	**Ẹ**
3	8	4
5	6	4
7	5	3

MODULE 5

ADDITION
ÌRÒPỌ̀

ADDITION	**ÌRÒPỌ**
ADDITION OF WHOLE NUMBERS	**ÌRÒPỌ ÀWỌN ÒÒKÀ ODINDI**
DIGIT	**ẸYỌ-ÒNKÀ**
ADDENDS	**ÈRÒ**
SUM	**ÀRÒPỌ**

+	
A + B	
Add **A** to **B** *or* add **B** to **A** Addition of **A** to **B** , or **B** to **A** give the same value: **A + B = B + A** Therefore, addition is commutative **A + B = D** **A** and **B** are called **Addends** **D** is the sum	Ro **A** àti **B** pọ *tàbí* ro **B** àti **A** pọ Àròpọ **A** àti **B**, tàbí àròpọ **B** ati **A** fún wa ní iye kan: **A + B = B + A** Nítorínáà a óò sọ pé Ìròpọ wọra **A + B = D** **A** àti **B** ni a npe ní àwọn **Èrò** **D** sì ni **Àròpọ**̀

ÀPẸRẸ 1 /EXAMPLE 1

		23	=	ìdì	2	+	ẹyọ	3
		45	=	ìdì	4	+	ẹyọ	5
23	+	45	=	ìdì	6	+	ẹyọ	8

		23	jẹ́	ìdì	2	ati	ẹyọ	3
		34	jẹ́	ìdì	3	ati	ẹyọ	4
23	pẹ̀lú	34	jẹ́	ìdì	5	ati	ẹyọ	7

ÀṢEWÒ 1/ EXERCISE 1

	I	E		I	E		I	E		I	E		I	E		I	E
1.	1	3	2.	2	4	3.	3	8	4.	3	4	5.	4	1	6.	2	4
+	1	4	+	4	3	+	3	1	+	1	5	+	3	6	+	4	2
	2	7															

8 + 5 = ẹyọ 8 + ẹyọ 5
= ìdì 1 + ẹyọ 3 = 13

ÀṢEWÒ 2/ EXERCISE 2

1.	5	pẹ̀lú	9	jẹ́	ìdì	1	àti	ẹyọ	4
2.	5	+	6	=	ìdì		+	ẹyọ	
3.	8	+	3	=	ìdì		+	ẹyọ	
4.	4	+	8	=	ìdì		+	ẹyọ	
5.	5	+	7	=	ìdì		+	ẹyọ	
6.	4	+	7	=	ìdì		+	ẹyọ	
7.	7	+	5	=	ìdì		+	ẹyọ	
8.	9	+	8	=	ìdì		+	ẹyọ	
9.	6	+	9	=	ìdì		+	ẹyọ	
10.	7	+	7	=	ìdì		+	ẹyọ	

ÀṢEWÒ 3/ EXERCISE 3

Complete /Ṣèparí

1.	8	+	3	=	11	**2.**	4	+	6	=	
3.	7	+	5	=		**4.**	3	+	9	=	
5.	5	+	9	=		**6.**	5	+	6	=	
7.	6	+	7	=		**8.**	7	+	5	=	
9.	8	+	9	=		**10.**	6	+	5	=	

56 + 7 = ìdì 5 + ẹyọ 6 + ẹyọ 7 = ìdì 5 + ìdì 1 + ẹyọ 3
= ìdì 6 + ẹyọ 3 = 63

ÀṢEWÒ 4/ EXERCISE 4

Complete/ Ṣèparí:

1.	67	+	9	=	76	**2.**	6	+	17	=	
3.	7	+	38	=		**4.**	76	+	6	=	
5.	53	+	7	=		**6.**	8	+	21	=	
7.	7	+	74	=		**8.**	44	+	8	=	
9.	66	+	6	=		**10.**	9	+	17	=	

I Ẹ 5 7 6 1 3 5 0 6 3	**I Ẹ** 7 4 5 1 2 4 0 5 2

ÀṢEWÒ 5/ EXERCISE 5
Add /Ṣàròpọ:

1.	**I**	**Ẹ**	**2.**	**I**	**Ẹ**	**3.**	**I**	**Ẹ**	**4.**	**I**	**Ẹ**
	8	6			7		2	4			8
+		4	+	3	6	+		6	+	7	6

EXERCISE 6: / ÀṢEWÒ 6:
Add/ Ṣàròpọ àwọn yi

1.	**Ọ**	**I**	**Ẹ**	**2.**	**Ọ**	**I**	**Ẹ**	**3.**	**Ọ**	**I**	**Ẹ**	**4.**	**Ọ**	**I**	**Ẹ**
	3	4	3		2	2	3		4	6	7		5	2	1
+	5	2	5	+	3	3	6	+	3	2	1	+	3	7	8

ÀPẸRẸ 1 / EXAMPLE 1
Add/ Ṣàròpọ àwọn yi

1.	**Ọk**	**Ọ**	**I**	**Ẹ**	2.	**Ọk**	**Ọ**	**I**	**Ẹ**	3.	**Ọk**	**Ọ**	**I**	**Ẹ**	4.	**Ọk**	**Ọ**	**I**	**Ẹ**
			1				1				1							1	
	3	1	3	8		5	2	4	6		4	7	9	7		3	3	1	6
+	4	7	2	4	+	2	2	9	1	+	1	4	0	2	+	4	2	4	7
	7	8	6	2		7	5	3	7		6	1	9	9		7	5	6	3

ÀṢEWÒ 7/ EXERCISE 7
Add / Ṣàròpọ àwọn yi:

1.	Ọk	Ọ	I	Ẹ	2	Ọk	Ọ	I	Ẹ	3.	Ọk	Ọ	I	Ẹ	4.	**Ọk**	**Ọ**	**I**	**Ẹ**
	3	3	2	1		1	5	5	2		4	2	5	7		5	3	1	5
+	3	5	6	8	+	3	2	5	4	+	2	9	1	2	+	2	2	4	8

MODULE 6

SUBTRACTION
ÌYỌKÚRÒ

SUBTRACTION	**ÌYỌKÚRÒ**
SUBTRACTION OF WHOLE NUMBERS	**ÌYỌKÚRÒ ÀWỌN ÒÒKÀ ODINDI**
MINUEND	**ÌNÍ**
SUBTRATHEND	**ÀYỌKÚRÒ**
DIFFERENCE	**ÌYÀTỌ**

–	
A – B	
Subtract **B** from **A;** If **A** is subtracted from B, and B is subtracted from A, we will not get the same value except if A is the same as B **A – B ≠ B - A** (afi bi **A** =**B**) (Subtraction is not commutative) **A - B = D** **A** is the **minuend** **B** is the **substrahend** **D** is the **Difference**	Yọ **B** kurò ní **A.** Bí a bá yọ **A** kúrò ní **B**, ti a sì yọ **B** kúrò ní **A**, a kò leè ní iye kan náà, àfi bí **A** bá jẹ́ iyekan pẹ̀lú **B**: **A – B ≠ B - A** (afi bi **A** =**B**) Nítorínáà, Ìyọkúrò kò wọra **A - B = D** **A** ni **Ìní** **B** ni **Àyọkúrò** **D** si ni **Ìyàtọ**

ÀLÀYÉ / EXPLANATION

34 = ìdì 3 + ẹyọ 4
21 = ìdì 2 + ẹyọ 1

34 - 21 = ìdì 1 + ẹyọ 3 = 13

						I	**Ẹ**		
	30	+	4			3	4		
-	20	+	1		-	2	1		
	10	+	3		=	1	3		

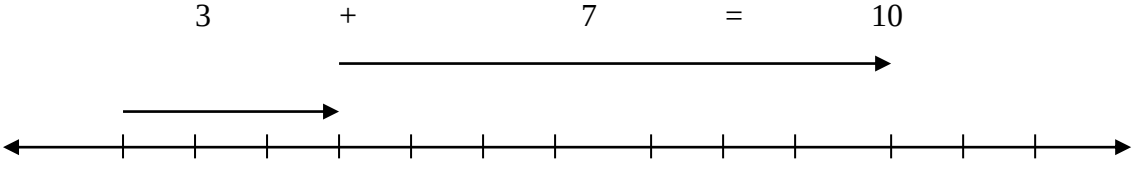
ÀṢEWÒ 1/ EXERCISE 1

Take away / Ṣàyọkúrò:

1.	**I**	**Ẹ**	**2.**	**I**	**Ẹ**	**3.**	**I**	**Ẹ**	**4.**	**I**	**Ẹ**
	9	6		7	5		4	9		5	7
-	2	0	-	1	3	-	4	2	-	3	1

Ìyọkúrò jẹ́ àdàkejì Ìròpọ

3 + 7 = 10



10 - 3 = 7

X	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**		**X**	**X**	**X**	**X**	**X**	**X**

16 - 9 = 6 + 10 - 9 = 6 + 1 + 7

ÀṢEWÒ 2/ EXERCISE 2:

1.	12	-		=	7	**2.**		-	8	=	4	**3.**	12	-		=	0
4.	15	-		=	8	**5.**		-	7	=	5	**6.**	14	-		=	5

ÀṢEWÒ 3/ EXERCISE 3:

1.	Subtract 33 from 52	Yọ 33 kúrò ní 52	
2.	From 72, take away 46	Nínú 72, mú 46 kúrò	
3.	38 minus 7	38 dín 7	
4.	Take away 27 from 64	Yọ 27 nínú 64	
5.	There are 50 oranges, 7 are bad, how many oranges are good?	A ní 50 ọsàn, 7 nínú wọn bàjẹ, Mélo ni àwọn ọsàn tó dára?	

ÀṢEWÒ 4/ EXERCISE 4

1	From six hundred and twenty six, take away two hundred and nineteen	Nínú ẹfà ọrún àt'èjì-dì l'ẹfà, yọ èjì ọrún àt'ìdìkan l'ẹsán	
2	Take away two hundred and forty three from five hundred and thirty eight	Mú èjì ọrún àt'ẹta-dì l'ẹta kúrò nínú àrún ọrún àt'ẹta-dì l'ẹjọ	
3	Find the difference between 378 and 199	Wá ìyàtọ láàrín 378 àti 199	
4	There are 30 children in a classroom, If 16 are girls, how many are boys?	Àwọn 30 ọmọ ló wà ní kíláàsì. Bí 16 bá jẹ́ ọmọbìrin, Àwọn mélo ni ọmọkùnrin?	

MODULE 7

MULTIPLICATION
ÌSỌDIPÚPỌ̀

MULTIPLICATION	**ÌSỌDIPÚPỌ̀**
MULTIPLICATION OF WHOLE NUMBERS	**ÌSỌDIPÚPỌ̀ ÒÒKÀ ODINDI**
MULTIPLICAND	**ÌLỌ́PO**
MULTIPLIER	**ÌFILỌ́PO**
PRODUCT	**ẸSÚN**

X	
A X B = D	
Multiply **A** with **B**	Sọ **A** di púpọ̀ pẹ̀lú **B**
If we multiply A with B, or multiply B with A, we get the same value: **A x B = B x A**	Bí a bá sọ **A** di púpọ̀ pẹ̀lú **B**, tí a sì sọ **B** di púpọ̀ pẹ̀lú **A**, iye kan náà ni a óò ní: **A x B = B x A**
Therefore, multiplication is commutative **A x B = D**	Nítorínáà a óò sọ pe Ìsọdipúpọ̀ wọra **A x B = D**
A is the Multiplicand **B** is the Multiplier **D** is the product of the multiplication	**A** ni a npè ní **Ìlọpo** **B** si ni a npè ní **Ìfilọpo** **D** ni a npè ní **ẹsún** (òun ní iye tí a ní nígbàtí a fi **A** sọ **B** di púpọ̀)
When B is the Multiplicand, A will be the multiplier:	Nígbàtí B bá ṣe Ìlọpo, A yoo jẹ́ Ìfilọpo

EXPLANATION: ÀLÀYÉ

2 + 2 + 2 = 3 x 2 = 2 Multiplied by 3/ A sọ 2 dipúpọ̀ lọnà 3 = 6

3 + 3 = 2 x 3 = 3 Multiplied by 2/ A sọ 3 dipúpọ̀ lọnà 2 = 6

3 + 3 + 3 + 3 = 4 x 3 = 3 multiplied by 4/A sọ 3 dipúpọ̀ lọnà 4 = 12

4 + 4 + 4 = 3 x 4 = 4 multiplied by 3/ A sọ 4 dipúpọ̀ lọnà 3 = 12

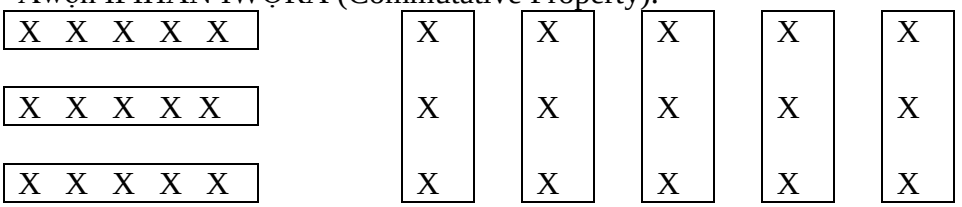
ÀṢEWÒ 1/ EXERCISE 1

Ṣèparí / Complete:

1. 2 x 2 = ☐ **2.** 6 x 2 = ☐ **3.** 3 x 2 = ☐

4. 10 x 2 = ☐ **5.** 9 x 2 = ☐ **6.** 4 x 2 = ☐

Àwọn ÌFIHÀN ÌWỌRA (Commutative Property):



3 X 5 = 5 X 3

ÀṢEWÒ 2 / EXERCISE 2

Ṣepari / Complete:

1. Àwọn ọmọbinrin mẹwa ní ojú : ☐ x ☐ = ☐

2. Ajá márun ní ẹsẹ : ☐ x ☐ = ☐

ÀṢEWÒ 3/ EXERCISE 3

						Product /Ẹsún
1	Multiply Ṣèsọdipúpọ̀	**3**	by pẹ̀lú	**7**	=	21
2	Multiply Ṣèsọdipúpọ̀	**7**	by pẹ̀lú	**3**	=	
3	Multiply Ṣèsọdipúpọ̀	**9**	by pẹ̀lú	**2**	=	
4	Multiply Ṣèsọdipúpọ̀	**10**	by pẹ̀lú	**3**	=	
5	Multiply Ṣèsọdipúpọ̀	**12**	by pẹ̀lú	**4**	=	

ÀṢEWÒ 4/ EXERCISE 4

1	A lorry has 6 tyres, How many tires do 9 such lorries have?	Ọkọ akẹrù kan ní táyà 6, táyà mélo ni 9 irú ọkọ bẹẹ ní?	
2	6 x Y = 42, Find Y	6 x Y = 42, kíni Y	
3	There are 12 months in a year. How many months are there in 5 years	Ọṣù 12 ló wà ninú ọdún kan. Ọṣù mélo ló wà ninú ọdún 5	
4	Find the product of 442 and 46	Wá ẹsún 442 àti 46	
5	There are 245 pages in a book. Find the number of pages in 35 such books	Ojú ewe 245 ló wà nínú iwé kan. Wá iye ojú-ewé tó wà nínú 35 irú iwé yi	

ÀṢEWÒ 5/ EXERCISE 5

1	Multiply four hundred and seventy nine by four hundred and sixty five	Ṣèsọdipúpọ̀ ẹrin ọrún àt'èje-dì l'ẹsán pẹlu ẹrin ọrún àt'ẹfa-dì l'árun	
2	A bag of rice weighs 143 kg. Find the weight of 568 bags	Àpò ìrẹsì kan wọn 143 kg. Wá ìwọn àpo ìrẹsì 568	
3	Each basket contains 459 oranges. How many oranges are there in 259 baskets?	Àpẹrẹ kọọkan ní 459 ọsàn. Ọsàn mélo ló wà nínú 259 àpẹrẹ	

MODULE 8

DIVISION
PÍNPÍN

DIVISION	**PÍNPÍN**
DIVISION OF WHOLE NUMBERS	**PÍNPÍN ÒÒKÀ ODINDI**
DIVIDEND	**ÈPÍN**
DIVISOR	**ÌFIPÍN**
QUOTIENT	**ÌPÍN**
REMAINDER	**ÌṢẸ́KÙ**

÷

A ÷ B = D

Divide **A** with **B**: If we divide **A** with **B**, and divide **B** with **A**, we will not get the same value, except if **A** has the same value with **B** **A ÷ B ≠ B ÷ A** (except if **B** = **A**) Therefore, division is not commutative **A ÷ B = D** **A** is the **dividend**: **It is the value to be divided** **B** is the **divisor**:It is the amount with which A is divided **D** is the quotient: It is the result of divìdìng A with B	Pin **A** sí wẹwẹ pẹlú **B** *tàbí* pín **A** pẹlú **B** [Bí a bá pín **A** sí wẹwẹ pẹlú **B**, tí a sì pín **B** sí wẹwẹ pẹlú **A**, a kò lè ní iye kan náà, àfi bí **A** bá jẹ́ iye kan pẹlú **B**: **A ÷ B ≠ B ÷ A** (afi bi **B** = **A**) Nítorínáà, Pinpín kò wọra **A ÷ B = D** **A** ni a npè ní **Èpín** (òun ni a fẹ pín) **B** ni a npè ní **Ìfipín** (oun ni a fẹ fi pín **A**) A sì lè wípé ìpín **A** pẹlú **B** kò jẹ́ iyekan pẹlú ìpín **B** pẹlú **A**. **D** ni a npè ní Ìpín (òun ni iye ti a ní nígbàtí a pín **A** pẹlú **B**)

ÀLÀYÉ 1 / EXPLANATION 1:

DIVISION OF MULTIPLES OF 10	PÍNPÍN ÀWỌN ÌLỌPO 10
To divide a whole number ending in 0 by 10, remove the zero at the end of the number:	Bí a bá fẹ pín àwọn èpín tó ní òdo lẹhìn wọn pẹlú 10, a óò yọ òdo kan lẹhin èpín yi. Èyí ni yóò jẹ́ ìpín rẹ.
470 ÷ 10 = $\frac{47 \times 10}{10}$ = 47	

ÀLÀYÉ 2 / EXPLANATION 2:

DIVISION BY MULTIPLES OF 10	PÍNPÍN PẸLÚ ÌLỌPO 10
To divide a whole number by a multiple of 10, first divide by 10. Then, remove zero from the divisor and use it to divide the result obtained:	Bí a bá fẹ pín èpín kan pẹ̀lú àwọn ìfipín tó jẹ́ ìlọpo 10, a óò kọ pín èpín náà pẹ̀lú 10. Lẹ́hìn náà, yọ òdo kan lẹhin èpín yi ki a sì fi pín èsì tí a ní:
560 ÷ 20 = (560 ÷ 10) ÷ 2 = 56 ÷ 2 = 28 **10**	

ÀLÀYÉ 3 / EXPLANATION 3:

DIVISION WITH REMAINDER	PÍNPÍN PẸLÚ ÌSẸKÙ
83 ÷ 3	579 ÷ 8
I Ẹ 1 7 3 | 8 3 (Ìdì 8) - 6 0 2 3 (Ẹyọ 22) - 2 1 3 (Ìṣẹkù)	**Ọ I Ẹ** 7 2 8 | 5 7 9 (Ìdì 57) - 5 6 0 1 9 (Ẹyọ 18) - 1 6 3 (Ìṣẹkù)

ÀPẸRẸ 1/ EXAMPLE 1:

28 ÷ 2

28 = ìdì 2 + ẹyọ 8

x	x	x	x	x	x	+	x	x
x	x	x	x	x	x		x	x
x	x	x	x	x	x		x	x
x			x				x	x

28 ÷ 2 = ìdì 1 + ẹyọ 4 I E

x	x	x	+	x		1 4	
x	x	x		x		2 | 2 8	
x	x	x		x		— 2 0	
x				x		8	
						— 8	

ÀṢEWÒ 1/ EXERCISE 1

Ṣepínpín

1	10 2 ⟌ 20 20 00	2	3 ⟌ 44	3	4 ⟌ 52	4	3 ⟌ 36
5	5 ⟌ 215	6	7 ⟌ 178	7	9 ⟌ 420	8	7 ⟌ 229

ÀṢEWÒ 2/ EXERCISE 2

1	A packet contains 14 pencils. How many packets do 784 pencils fill?	Egbìrín kan ní ìkeke-kọwé 14. Egbìrín mélo ni yóò gba 784 ìkeke-kọwé	
2	If one factor of 4752 is 132, what is the other factor?	Bí ìkan nínú àwọn ìfipín 4752 bá jẹ́ 132, kini ìfipín miràn yóò jẹ́?	
3	The volume of a cuboid is 8064 cm^3, If the length is 24 cm and the width is 16 cm, find the height	Àyè inú igọn kan jẹ́ 8064 cm^3. Bí gígùn rẹ bá jẹ́ 24 cm, tí ìbù rẹ sì jẹ́ 16 cm, kíni òòró rẹ.	

MODULE 9

FRACTIONS
ÀWỌN ÌDÁSÍWẸ́WẸ́

FRACTIONS	ÀWỌN ÌDÁSÍWẸ́WẸ́

$$\frac{A}{B}$$

PROPER FRACTIONS	ÌDÁSÍWẸ́WẸ́ TÍTỌ
IMPROPER FRACTIONS	ÌDÁSÍWẸ́WẸ́ ÀÌTỌ
EQUIVALENT FRACTIONS	ÌDÁSÍWẸ́WẸ́ ỌGBỌGBA
MIXED NUMBERS	ÀWỌN ÒÒKÀ ÀDÀPỌ
LEAST COMMON DENOMINATOR (LCD)	ÌFIPÍN KÉKERÉ ÀJỌNÍ

A ← NUMERATOR B ← DENOMINATOR	A ← ÈPÍN B ← ÌFIPÍN

1	One	Ẹyọ kan
½	One half	Ìdájì (idá sí méjì) kan
1/3	One Third	Ìdámẹta kan
¾	Three quarters	Ìdámẹrin mẹta
1/10	One tenth	Ìdámẹwa kan, Ìdá-ìdì kan
4/10	Four tenths	Ìdámẹwa mẹrin, Ìdá-ìdì mẹrin
2/20	Two twentieth	Ìdá èji-dì (ọnà) méjì *tàbí* Ìdá méjì lórí èjì-dì
7/34	Seven Thirty fourth	Ìdá ẹta-dì l'ẹrin ọnà méje *tàbí* Ìdá méje lórí ẹta-ìdì l'ẹrin
27/100	Twenty seven hundredths	Ìdá-ọrún (ọnà) éjì-dì l'eje; Ìdá éjì-dì l'eje lóri ọrún kan

PROPER FRACTIONS:
Proper fractions are numbers less than 1 unit. The numerator is smaller than the denominator

IMPROPER FRACTIONS:
Improper fractions are numbers bigger than one unit. In improper fractions, the numerator is bigger than the denominator.

EQUIVALENT FRACTIONS:
Equivalent fractions are numbers*******

MIXED NUMBERS:
Mixed numbers are those that contain whole numbers and proper fractions

ÌDÁSÍWẸ́WẸ́ TITỌ:
Àwọn Ìdásíwẹ́wẹ́ titọ ni àwọn òòkà tó kéré ju ẹyọ kan. Èpin rẹ kéré ju Ìfipín rẹ

ÌDÁSÍWẸ́WẸ́ AITỌ
Àwọn Ìdásíwẹ́wẹ́ àìtọ ni àwọn òòkà tó tóbi ju ẹyọ kan. Àwọn ti èpín wọn tóbi ju ìfipín wọn lọ.

ÌDÁSÍWẸ́WẸ́ ỌGBỌGBA
Ìdásíwẹ́wẹ́ ọgbọgba *********

ÀWỌN ÒÒKÀ ÀDÀPỌ:
Àwọn òòkà adapọ jẹ́ àwọn tó ní òòkà odindi àti Ìdásíwẹ́wẹ́ títọ

ÀPẸRẸ 1 / EXAMPLE I

	$\frac{1}{2}$	one part out of two equal parts		$\frac{1}{2}$	apá kan nínú apá méjì ọgba

ÀṢEWÒ 1/ EXERCISE 1:

Say whether the fraction is a proper fraction (PF), an improper fraction (IF)or a mixed number (MN)	**Sọ bọya àwọn Ìdásíwẹ́wẹ́ yi jẹ́ ìdásíwẹ́wẹ́ titọ (IT), ìdásíwẹ́wẹ́ àìtọ (IA) tàbi òòkà adapọ (EA)**

1.	$\frac{1}{2}$	IT	2. $\frac{3}{2}$		3. $7\frac{1}{2}$	
4.	$\frac{5}{6}$		5. $3\frac{1}{8}$		6. $\frac{24}{60}$	
7.	$38\frac{4}{9}$		8. $\frac{9}{5}$		9. $\frac{31}{9}$	

ÀṢEWÒ 2/ EXERCISE 2:

Change to improper fractions	**Yi àwọn yi si ìdásíwẹ́wẹ́ aitọ**

1.	$8\frac{4}{5}$	$\frac{44}{5}$	**2.** $7\frac{2}{10}$		**3.** $5\frac{4}{6}$	
4.	$8\frac{6}{8}$		**5.** $9\frac{4}{8}$		**6.** $5\frac{5}{7}$	
7.	$3\frac{8}{9}$		**8.** $2\frac{5}{8}$		**9.** $1\frac{9}{10}$	

ÀLÀYÉ / EXPLANATION

ADDITION AND SUBTRACTION OF FRACTIONS	ÌRÒPỌ ATI IYỌKÚRO ÀWỌN ÌDÁSÍWẸ́WẸ́

Change each fraction to the same denominator using equivalent fractions. Then add or subtract.	Yi àwọn Ìdásíwẹ́wẹ́ kọọkan si ìfipín kan naa. Lẹhinnáà ṣe àròpọ tàbí àyọkúrò
Find the LCM of the denominators. Then using equivalent fractions, change each fraction so that each has the LCM as its denominator.	Wá ẹsún kékeré àjọní ti àwọn ìfipín. Lehin eyi, lo Ìdásíwẹ́wẹ́ ọgbọgba, yí àwọn Ìdásíwẹ́wẹ́ méjèèjì padà kí wọn ní ẹsún kékeré àjọní bí ìfipín

ÀPẸRẸ 2 / EXAMPLE 2

Add $\frac{1}{3}$ and $\frac{3}{4}$	**Ṣàròpọ $\frac{1}{3}$ and $\frac{3}{4}$**

Find the LCM of 3 and 4: Multiples of 3: 0,3,6,9,12,15,18,21… Multiples of 4: 0,4,8,12,16,2,24,28…. The LCM of 3 and 4 is 12	Wá ẹsún kékeré àjọní 3 ati 4 ẹsún 3: 0,3,6,9,12,15,18,21… ẹsún 4: 0,4,8,12,16,2,24,28…. ẹsún kékeré àjọní 3 àti 4 jẹ́ 12
Then using equivalent fractions, change the fractions so that each has have 12 as its denominator: $\frac{1}{3} = \frac{4}{12}$; $\frac{3}{4} = \frac{9}{12}$	Lo Ìdásíwẹ́wẹ́ ọgbọgba, yí àwọn Ìdásíwẹ́wẹ́ méjèèjì padà kí wọn ní 12 bí ìfipín: $\frac{1}{3} = \frac{4}{12}$; $\frac{3}{4} = \frac{9}{12}$
Add $\frac{4}{12}$ and $\frac{9}{12} = \frac{13}{12} = 1\frac{1}{12}$	Ṣàròpọ $\frac{4}{12}$ ati $\frac{9}{12} = \frac{13}{12} = 1\frac{1}{12}$

$1\frac{1}{4} + 2\frac{2}{3} = 1\frac{3}{12} + 2\frac{8}{12} = 3\frac{11}{12}$

$\frac{1}{4} - \frac{2}{3} + \frac{7}{12} = \frac{3}{12} - \frac{6}{12} + \frac{7}{12} = \frac{10}{12} - \frac{8}{12} = \frac{2}{12} = \frac{1}{6}$

$\frac{3}{4} + \frac{2}{3} - \frac{7}{12} = \frac{9}{12} + \frac{8}{12} - \frac{7}{12} = \frac{17}{12} - \frac{7}{12} = \frac{10}{12} = \frac{5}{6}$

ÀṢEWÒ 3/ EXERCISE 3

Add/Subtract the following fractions	**Ṣàròpọ/ Ṣàyọkúrò àwọn Ìdásíwẹ́wẹ́ yi**

1. $\frac{5}{8} + \frac{1}{4} =$ ☐

2. $\frac{1}{3} + \frac{1}{6} =$ ☐

3. $\frac{5}{6} - \frac{1}{3} =$ ☐

4. $\frac{7}{10} - \frac{1}{2} =$ ☐

ÀṢEWÒ 4/ EXERCISE 4

1.	Find the sum of $4\frac{3}{4}$ and $5\frac{4}{5}$	Wá àròpọ $4\frac{3}{4}$ àti $5\frac{4}{5}$	

2	Find the difference between $8\frac{1}{5}$ and $3\frac{5}{8}$	Wá ìyàtọ láàrín $8\frac{1}{5}$ ati $3\frac{5}{8}$	

3	Subtract the sum of $8\frac{2}{3}$ and $3\frac{1}{4}$ from $16\frac{5}{8}$	Ṣàyọkúrò àròpọ $8\frac{2}{3}$ àti $3\frac{1}{4}$ nínú $16\frac{5}{8}$	

MULTIPLICATION OF FRACTIONS	ÌSỌDIPÚPỌ̀ ÀWỌN ÌDÁSÍWẸ́WẸ́

To multiply two or more fractions, multiply their numerators and multiply their denominators	Láti ṣèsọdipúpọ̀ àwọn Ìdásíwẹ́wẹ́ méjì, ṣèsọdipúpọ̀ àwọn èpín wọn, kí a sì ṣèsọdipúpọ̀ àwọn ìfipín wọn

ÀPẸRẸ 1 / EXAMPLE 1

Multiply $\frac{1}{2}$ and $\frac{3}{5}$	**Ṣèsọdipúpọ̀ $\frac{1}{2}$ ati $\frac{3}{5}$**
Multiply 1 by 3 = 3 Multiply 2 by 5 = 10 The product is $\frac{3}{10}$	Ṣèsọdipúpọ̀ 1 pẹ̀lú 3 = 3 Ṣèsọdipúpọ̀ 2 pẹ̀lú 5 = 10 ẹ̀sún re je $\frac{3}{10}$

ÀṢEWÒ 3/ EXERCISE 3

Multiply the following fractions	**Ṣèsọdipúpọ̀ àwọn Ìdásíwẹ́wẹ́ yi**

1. $\frac{3}{4} \times \frac{1}{3} =$ ☐
2. $\frac{1}{2} \times \frac{1}{4} =$ ☐
3. $\frac{2}{3} \times \frac{1}{3} =$ ☐
4. $\frac{3}{5} \times \frac{1}{2} =$ ☐
5. $\frac{2}{3} \times \frac{1}{3} \times \frac{1}{4} =$ ☐
6. $\frac{3}{5} \times \frac{1}{2} \times \frac{1}{3} =$ ☐

ÀPẸRẸ 1 / EXAMPLE 1

Multiply $\frac{1}{2}$ and $2\frac{3}{5}$	**Ṣèsọdipúpọ̀ $\frac{1}{2}$ ati $\frac{3}{5}$**
Change **$2\frac{3}{5}$** to mixed numbers: $\frac{5x2+3}{5} = \frac{13}{5}$ Multiply 1 by 13 = 13 Multiply 2 by 5 = 10 The product is $\frac{13}{10} = 1\frac{3}{10}$	Ṣàyípadà **$2\frac{3}{5}$** si ooka adapo: $\frac{5x2+3}{5} = \frac{13}{5}$ Ṣèsọdipúpọ̀ 1 pẹ̀lú 13 = 13 Ṣèsọdipúpọ̀ 2 pẹ̀lú 5 = 10 ẹ̀sún re je $\frac{13}{10} = 1\frac{3}{10}$

ÀṢEWÒ 3/ EXERCISE 3

Multiply the following fractions	**Ṣèsọdipúpọ̀ àwọn Ìdásíwẹ́wẹ́ yi**

1. $\frac{1}{2} \times 2\frac{1}{2} =$ ☐

2. $\frac{1}{3} \times 1\frac{1}{4} =$ ☐

3. $\frac{2}{3} \times 3\frac{1}{3} =$ ☐

4. $\frac{1}{4} \times 2\frac{1}{2} =$ ☐

DIVISION OF FRACTIONS	PÍNPÍN ÀWỌN ÌDÁSÍWẸ́WẸ́

To divide one fraction by another fraction***	Láti ṣepínpín Ìdásíwẹ́wẹ́ kan pẹ̀lú Ìdásíwẹ́wẹ́ miran

ÀPẸRẸ 1 / EXAMPLE 1

Multiply $\frac{1}{2}$ and $\frac{3}{5}$	**Ṣèsọdipúpọ̀ $\frac{1}{2}$ ati $\frac{3}{5}$**
Multiply 1 by 3 = 3 Multiply 2 by 5 = 10 The product is $\frac{3}{10}$	Ṣèsọdipúpọ̀ 1 pẹ̀lú 3 = 3 Ṣèsọdipúpọ̀ 2 pẹ̀lú 5 = 10 ẹsún re je $\frac{3}{10}$

MODULE 10

DECIMALS
ÀWỌN ẸSẸ

DECIMALS	ÀWỌN ẸSẸ
DECIMAL FRACTIONS	ÌDÁSÍWẸ́WẸ́ ẸLẸ́SẸ

1	One	Eyọ kan tàbí ení
0·1	Zero point one	Òdo ẹsẹ ení
0·01	Zero point zero one	Òdo ẹsẹ òdo àt'ení
0·001	Zero point zero zero one	Òdo ẹsẹ òdo, òdo àt'ení
0·0001	Zero point zero zero zero one	Òdo ẹsẹ òdo, òdo òdo àt'ení

EXPLANATION: ÀLÀYÉ

	COMMON FRACTION/ ÌDÁSÍWẸ́WẸ́	DECIMAL FRACTION/ ÌDÁSÍWẸ́WẸ́ ẸLẸSẸ
1 Tenth Ida-ìdì kan	$\frac{1}{10}$	0.1 (read as zero point one) 0.1 (tí a nkà ní 'òdo, ẹsẹ ìkan')
1 Hundreth Ida-ọrún kan	$\frac{.1.}{100}$	0.01 (read as 'zero point zero one' 0.01 (tí a nkà ní 'òdo,ẹsẹ òdo, ìkan')
1 Thousandth Ida-ọkẹ kan	$\frac{1}{1000}$	0.001(read as 'zero point zero, zero, one' 0.001 (tí a nkà ní 'òdo, ẹsẹ òdo, òdo, ìkan')

ÀLÀYÉ 2 / EXPLANATION 2

ADDITION AND SUBTRACTION OF DECIMAL FRACTIONS	ÌRÒPỌ ATI ÌYỌKÚRÒ ÀWỌN ÌDÁSIWẸWẸ ẸLẸSẸ

ÌDÌ	ẸYỌ	ÌDÁ– ÌDÌ	ÌDÁ-ỌRÚN	ÌDÁ-ỌKẸ	=	
I	E	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$		
3	4	5	6	7	=	34.567

ÀPẸRẸ 1/ EXAMPLE 1:

1.05 + 0.005 + 2.1

	ẸYỌ		**ÌDÁ -ÌDÌ**	**ÌDÁ-ỌRÚN**	**ÌDÁ-ỌKẸ**
	1	.	0	5	0
+	0	.	0	0	5
+	2	.	1	0	0
=	3	.	1	5	5

ÀṢEWÒ 1/ EXERCISE 1

Add the following decimals	**Ṣàròpọ àwọn ẹsẹ yi**

1. 7.4 + 6.7 [ ]

2. 3.9 + 4.2 = [ ]

3. 9.67 + 3.74 [ ]

4. 4.314 + 2.942 = [ ]

5. 32 + 0.003 3.4 + 0.75 = [ ]

6. 2.041 + 3.702 8.06 + 4.806 = [ ]

7. ~~₦~~9.46 + ~~₦~~6.42 + ~~₦~~8.06 = [ ]

8. 4.36 m + 6.24 m + 3.41 m = [ ]

ÀṢEWÒ 2/ EXERCISE 2

Subtract the following decimals	**Ṣàyọkúrò àwọn ẹsẹ yi**

1. 8.9 - 6.7 [ ]
2. 6.4 - 4.6 = [ ]
3. 7.67 - 3.74 [ ]
4. 6.324 - 2.932 = [ ]
5. 6.95 - 4.82 [ ]
6. 8.95 - 7.87 [ ]

ÀLÀYÉ 2 / EXPLANATION 2

MULTIPLICATION AND DIVISION OF DECIMAL FRACTIONS	ÌSỌDIPÚPỌ̀ ATI PÍNPÍN ÀWỌN ÌDÁSIWẸ̀WẸ̀ ẸLẸSẸ

ÌDÌ	ẸYỌ	ÌDÁ– ÌDÌ	ÌDÁ-ỌRÚN	ÌDÁ-ỌKẸ	=	
I	E	1/10	1/100	1/1000		
3	4	5	6	7	=	34.567

ÀPẸRẸ 1/ EXAMPLE 1:

1.05 + 0.005 + 2.1

	ẸYỌ		ÌDÁ -ÌDÌ	ÌDÁ-ỌRÚN	ÌDÁ-ỌKẸ
	1	.	0	5	0
+	0	.	0	0	5
+	2	.	1	0	0
=	3	.	1	5	5

ÀṢEWÒ 1/ EXERCISE 1

Add the following decimals	**Ṣàròpọ àwọn ẹsẹ yi**

1. 7.4 + 6.7 =

2. 3.9 + 4.2 =

3. 9.67 + 3.74 =

4. 4.314 + 2.942 =

5. 32 + 0.003 3.4 + 0.75 =

6. 2.041 + 3.702 8.06 + 4.806 =

7. ~~₦~~9.46 + ~~₦~~6.42 + ~~₦~~8.06 =

8. 4.36 m + 6.24 m + 3.41 m =

9 4.42 kg + 5.16 kg + 3.54 kg =

MODULE 11

ORDER OF OPERATIONS
ÈTÒ ÀṢẸ-ÌṢÍRÒ

OPERATIONS	**ÀWỌN ÀṢẸ-ÌṢÍRÒ**
ORDER	**ÈTÒ**
ORDER OF OPERATIONS	**ÈTÒ ÀWỌN ÀṢẸ-ÌṢÍRÒ**
ORDER OF OPERATIONS: Rule used to clarify mathematical operation should be performed first	

OPERATION	**SIGN**	**YORUBA**
BRACKET		**ÀMÌN ÀKÁMỌ́**
INNER BRACKET	**(…)**	**ÀKÁMỌ́ INÚ**
MIDDLE BRACKET	**{ …}**	**ÀKÁMỌ́ ÀÁRÍN**
OUTER BRACKET	**[…]**	**ÀKÁMỌ́ ÒDE**
OF		**N'NU**
DIVISION	**÷**	**PÍNPÍN**
MULTIPLICATION	**X**	**ÌSỌDIPÚPỌ̀**
ADDITION	**+**	**ÌRÒPỌ̀**
SUBTRACTION	**-**	**ÌYỌKÚRÒ**

ORDER OF OPERATIONS

ENGLISH		YORUBA		
			Tu	
BRACKET	B			ÀKÁMỌ́
OF	O			NÍNÚ
DIVISION	D			PÍNPÍN
MULTIPLICATION	M		Se	ÌSỌDIPÚPỌ̀
ADDITION	A		ati	ÌRÒPỌ̀
SUBTRACTION	S		laisi	ÌYỌKÚRÒ

MNEMONICS	IFISERANTI
BODMAS	ADURA: Tu àkámọ nnu pinpin. Ṣe isodipupo ati iropo laisi iyokuro

ÀLÀYÉ 1/ EXPLANATION1:

Question/Ibeere
Solve/ Ṣojutuu: [(1 + 2) – 3] – (4 -5) Solution: 1. Remove inner bracket/ Tu Àkámọ-inu: 1 +2 = 3; 4 – 5 = -1 …….[3 -3] + 1 2. Remove outer bracket/ Tu Àkámọ-ode 3 – 3 = 0; … ……0 +1 = +1 Answer = +1

ÀLÀYÉ 2/ EXPLANATION2:

Question/Ibeere
Solve/ Ṣojutuu: $2\times(6+7) - 7^2$ $2\times(6+7)-7^2$ {first remove the inner bracket/ Tu àkámọ inu….(6+7) = 13} $= 2\times(13)-7^2$ {second, calculate the exponent/ Ṣeṣiro edi-ooka …7^2 = 49 $= 2\times(13)-49$ {third, calculate the multiplication/ Ṣeṣiro isodipupo… $2\times(13)$ = 26 = 26-49 {finally, calculate the subtraction/ Nigbehin, Ṣeṣiro Iyokuro……26 - 49} = -23 {Answer / Esi}

ÀṢEWÒ 1/ EXERCISE 1

Ibeere 1/ Question 1
Solve/ Ṣojutuu: 48 ÷ (6+2) ÷ 2

ÀṢEWÒ 2/ EXERCISE 2

Ibeere 1/ Question 1
Solve/ Ṣojutuu: (40 + 5) x (30-21) ÷ 9

ÀṢEWÒ 3/ EXERCISE 3

Ibeere 1/ Question 1
Solve/ Ṣojutuu: $3\times(6+7) - 6^2$

MODULE 12

APPROXIMATIONS
ÌPẸ́RA

APPROXIMATIONS	**IPẸRA**
ESTIMATE	**FOJÚWỌN (FI OJÚ WỌN)**

APPROXIMATION SYMBOL	≅	**ÀMÌN ÌPẸRA**

A ≅ B	
A is approximately equal to **B** **A** is not equal to **B** but it is almost the same as **B** Problem: Which of these numbers does 2.84 approximate most: 4.55, 3.00, 9.12, 6.24 Answer 3.00	Iye **A** pẹ iye **B**. **A** kìí ṣe iye kan náà pẹ̀lú **B**, ṣùgbọn ó pẹ (sún mọ) iye **B**. Èwo nínú àwọn òòkà yi ni 2.84 pẹ jù: 4.55, 3.00, 9.12, 6.24 Ìdáhùn: 3.00

ÀLÀYÉ / EXPLANATION:

6.7 is approximately equal to 7 to the nearest whole number	6.7 ≅ 7	6.7 pẹ 7 jù gbogbo àwọn òòkà odindi
6.3 is approximately equal to 6 to the nearest whole number	6.3 ≅ 6	6.3 pẹ 6 jù gbogbo àwọn òòkà odindi
17 is approximately equal to 20 to the nearest ten	17 ≅ 20	17 pẹ 20 jù gbogbo àwọn òòkà oní-ìdì
13 is approximately equal to 10 to the nearest 10	13 ≅ 10	13 pẹ 10 jù gbogbo àwọn òòkà oní-ìdì

ÀṢEWÒ 1/ EXERCISE 1

Write to the nearest ten	**Kọ òòkà oni-ìdì ti àwọn yi pẹ**

1. 28	30	**2.** 56		**3.** 38	
4. 141		**5.** 279		**6.** 452	
7. 89		**8.** 94		**9.** 957	

ÀLÀYÉ / EXPLANATION:

Estimate by writing to the nearest whole number	Fojúwọn àwọn òòkà odindi tí àwọn yi pẹ

14.6	+	15.1	≅	15	+	15	=	30
2.3	+	7.9	≅	2	+	8	=	10

Actual Result:

$$\begin{array}{r} 14.6 \\ +\ 15.1 \\ \hline 29.7 \\ \hline \end{array}$$

Esi gìdì:

$$\begin{array}{r} {\scriptstyle 1} \\ 2.3 \\ +\ 7.9 \\ \hline 10.2 \\ \hline \end{array}$$

ÀṢEWÒ 2/ EXERCISE 2

Estimate by writing to the nearest whole number and compare with the actual result	**Fojuwọn àwọn òòkà odindi ti àwọn yi pẹ, kí ẹ sì fi èsì rẹ wé èsì gidi**

					Estimate/Ìfojúwọn	Actual result/Èsì gidi
1.	4.7	+	1.1	=		
2.	45.1	+	36.9	=		
3.	35.8	+	3.9	=		
4.	1.8	x	3	=		
5.	5.7	x	25	=		

MODULE 13

LENGTH MEASUREMENT
ÈTÒ GÌGÙN WÍWỌN

LENGTH MEASUREMENT	**ÈTÒ GÌGÙN WÍWỌN**
ESTIMATION	**ÌFOJÚWỌN**
CALCULATION	**ÌṢIRÒ**
INCH	**ÌKA**
FOOT	**ẸSẸ**
YARD	**ỌPÁ**
FURLONG	**ÒRÉRÉ**
MILE	**MÁÌLÌ**
LENGTH	**(ÌWỌN) GÍGÙN**
BREADTH	**(ÌWỌN) ÌBÚ**
HEIGHT	**(ÌWỌN) GÌGA**
WIDTH	**(ÌWỌN) ÌBÚ**

LENGTH MEASUREMENT
ÈTÒ ÌGÙN WÍWỌN

12 inches	12 ìka (ìdìkan l'éjì ìka)	1 ẹsẹ
3 feet	3 ẹsẹ (ẹsẹ mẹta)	1 ọpá
220 yards	220 ọpá (éjì ọrún àt'éjì-dì ọpá)	1 òréré (1 furlong)
1760 yards	1760 ọpá (ọkẹ kan, éje ọrún àt'ẹfà-dì ọpá)	1 máìlì
5280 feet	5280 ẹsẹ (àrun ọkẹ, éjì ọrún at'ẹjọ-dì ẹsẹ)	1 máìlì
6 furlongs	6 òréré (òréré mẹfà)	1 máìlì

LENGTH MEASUREMENT (SCIENTIFIC)
ÈTÒ ÌGÙN WÍWỌN (ÌMỌN-JÌNLẸ)

1 Kilometer	1 ọkẹmítà (ọkẹmítà kan)	1000 mítà
1 hectometer	1 ọrúnmítà (ọrúnmítà kan)	100 mítà
1 dekameter	1 ìdìmítà (ìdìmítà kan)	10 mítà
1 meter	1 míta (mítà kan)	1 mítà
1 decimeter	0.1 mítà (ìdá-ìdì mítà)	1/10 mítà
1 centimeter	0.01 mítà (ìdá-ọrún mítà kan)	1/100 mítà
1 millimeter	0.001 mítà (ìdá-ọkẹ mítà kan)	1/1000 mítà

ÀṢEWÒ 1/ EXERCISE 1

Estimate the lengths of the following:	**Fojuwọn gigun àwọn wọnyi:**

1.	Length of the blackboard	Ìwọn Gígùn ògiri ìkọ̀wé	
2.	Breath of the blackboard	Ìwọn Ìbú ògiri ìkọ̀wé	
3.	Height of the door	Ìwọn Ìga ilẹ̀kùn	
4.	Width of the teacher's chair	Ìwọn Ìbú ìjóko (ṣíà) tíṣà	
5.	Height of the teacher's table	Òòró tábìlì tíṣà	

ÀṢEWÒ 2/ EXERCISE 2

Change to meters and centimeters	**Ṣàyípadà sí mítà (m) àti ìdá-ọ̀rún mítà (cm)**

1. 115 cm.	1m 15cm	**2.** 165 cm.		**3.** 187 cm.	
4. 223 cm.		**5.** 296 cm.		**6.** 324 cm.	
7. 386 cm.		**8.** 579 cm.		**9.** 924 cm.	
10. 989 cm					

ÀṢEWÒ 3/ EXERCISE 3

Change to centimeters	**Ṣàyípadà sí ìdá-ọ́rún mítà (cm)**

1. 1m. 32 cm. = 1 0 0 cm + 3 2 cm = 1 3 2 cm

2. 1m. 46 cm.

3. 2m. 50 cm.

4. 5m. 55cm.

5. 7m. 86 cm.

6. 10m. 10cm.

ÀṢEWÒ 4/ EXERCISE 4

Change to meters	**Ṣàyípadà sí mítà (m)**

1. 1.241 km.

1.241 km
x 1000 m/km
= 1241 m

2. 6.002 km.

3. 5.168 km.

4. 21.32 km.

MODULE 14

CAPACITY MEASUREMENT
ÈTÒ ÀYÈ-INÚ WÍWỌN

CAPACITY MEASUREMENT	ÈTÒ ÀYÈ-INÚ WÍWỌN
AREA **1. ESTIMATION** **2. CALCULATION**	**ÒRÒ** **1. ÌFOJÚWỌN** **2. ÌṢÍRÒ**

Barrel	Àgbá
Bottle	Ìgò
Bucket	Garawa
Capacity	Àyè-inú
Container	Agolo
Cuboid	Ìgọn
Drum	Àgbá
Gourd	Agbè
Liquid	Asàn
Rectangular Container	Àpótí
Tablespoon	Ṣíbí-onjẹ
Tank	Àgbá-nlá
Teaspoon	Ṣíbí-tíì

FLUID MEASUREMENT
ÈTÒ ÀYÈ AṢÀN WÍWỌN

1 Liter = 1000 milliliters	1 lità = 1000 ìdá-ọkẹ lítà
1 milliliter = 0.001 liter	1 ìdá-ọkẹ lítà= 0.001 lítà
1 centiliter = 0.01 liter	1 ìdá-ọrún lítà = 0.01 lítà
1 dekaliter = 10 liter	1 ìdì lítà = 10 lítà
1 hectoliter= 100 liter	1 ọrún lítà= 100 lítà
1 kiloliter = 1000 liter	1 ọkẹ lítà = 1000 lítà

ÀṢEWÒ 1/ EXERCISE 1:

Change to milliliters	**Ṣàyípadà sí ìdá-ọkẹ lítà**

1. 2 liters/ Lita 2

2. 2 liters/ Lita 2

3. 4 liters/ Lita 4

4. 6 liters/ Lita 6

5. 1 1/2 liters/ Lita 1 1/2

6. 4 1/10 liters/ Lita 4 1/10

ÀṢEWÒ 2 / EXERCISE 2:

Write in liters	**Ṣàkọsílẹ ní lítà**

1. 2.000 milliliters/ Ìdá-ọkẹ Lita 2.000

2. 2.500 milliliters/ Ìdá-ọkẹ Lita 2.500

3. 7.750 milliliters/ Ìdá-ọkẹ Lita 7.750

4. 8.500 milliliters/ Ìdá-ọkẹ Lita 8.500

5. 1.200 milliliters/ Ìdá-ọkẹ Lita 1.200

6. 2.000 milliliters/ Ìdá-ọkẹ Lita 7.100

ÀṢEWÒ 3 / EXERCISE 3:

Write in liters and milliliters	**Ṣàkọsílẹ ní lítà ati ìdá-ọkẹ Lita**

1. 2.000 ml.

2. 1.437 ml

3. 3.224 liters

4. 5.100 liters

ÀṢEWÒ 4 / EXERCISE 4:

Multiply by 4	**Ṣèsọdipúpọ̀ pẹ̀lú 4**

1. 2.444 l. ☐ **2.** 1.437 l. ☐

3. 3.224 l. ☐ **4.** 5.100 l. ☐

ÀṢEWÒ 5 / EXERCISE 5:

Divide by 5	**Ṣepínpín pẹ̀lú 5**

1. 2.445 l. ☐ **2.** 1.435 l. ☐

3. 3.220 l. ☐ **4.** 5.100 l. ☐

ÀṢEWÒ 6 / EXERCISE 6:

How many half-lites are in	**Ìlajì-lítà mélo ló wà nínú**

1. 10 l. ☐ **2.** 14 l. ☐

3. 3 1/2 l. ☐ **4.** 5 1/2 l. ☐

MODULE 15

MASS / WEIGHT MEASUREMENT
ÈTÒ OKUN WÍWỌN

MASS MEASUREMENT	**ÈTÒ OKUN WÍWỌN**
WEIGHT	**ỌRÌN**
MASS **1. ESTIMATION** **2. CALCULATION**	**OKUN** **1. ÌFOJÚWỌN** **2. ÌṢÍRÒ**

MASS MEASUREMENT
ÈTÒ OKUN WÍWỌN

1 tonne = 1000 kg = 1,000,000 grams	1 toonu = 1000 ọkẹgrámù = 1,000,000 grámù
1 kilogram = 1000 grams	1 ọkẹgrámù (ọkẹgrámù kan) = 1000 grámù
1 hectogram = 100 gram	1 ọrúngrámù (ọrúngrámù kan) = 100 grámù
1 dekagram = 10 gram	1 ìdìgrámù (ìdìgrámù kan) = 10 grámù
1 decigram = 0.1 gram	0.1 grámù (ìda ìdìgrámù kan) = 1/10 grámù
1 centigram = 0.01 gram	0.01 grámù (ìdá ọrúngrámù kan) = 1/100 grámù
1 milligram = 0.001 gram	0.001 grámù (ìdá ọkẹgrámù kan)= 1/1000 grámù

ÀṢEWÒ 1/ EXERCISE 1:

Change to tonnes	**Ṣàyípadà sí tọ̀nù**

1. 5.000 kg/ ọkẹgrámù 5.000

2. 9.000 kg/ ọkẹgrámù 9.000

3. 2.500 kg/ ọkẹgrámù 2.500

4. 7.750 kg/ ọkẹgrámù 7.750

ÀṢEWÒ 2 / EXERCISE 2:

Write in grams	**Ṣàkọsílẹ ní grámù**

1. 2 kg/ ọkẹgrámù 2 ☐

2. 9 kg/ ọkẹgrámù 9 ☐

3. 7.750 kg/ ọkẹgrámù 7.750 ☐

4. 8.500 kg/ ọkẹgrámù 8.500 ☐

5. 0.25 kg/ ọkẹgrámù 0.25 ☐

6. 0.003 kg/ ọkẹgrámù 0.003 ☐

ÀṢEWÒ 3 / EXERCISE 3:

Change to kilograms	**Ṣàyípadà sí** ọkẹgrámù

1. 4 toones/ tọọnù 4 ☐

2. 6 toones/ tọọnù 6 ☐

3. 2.5 toones/ tọọnù 2.5 ☐

4. 4 1/2 toones/ tọọnù 4 1/2 ☐

5. 4.455 toones/ tọọnù 4.445 ☐

6. 6 3/4 toones/ tọọnù 6 3/4 ☐

ÀṢEWÒ 4 / EXERCISE 4:

Put these weights in increasing order of size	**Ṣètò àwọn ìwọn yi gẹgẹbí wọn ṣe tóbi sí**

1. 3/4 kg, 0.850 kg, 900 g, 825 g ☐

2. 850g, 0.008 kg, 0.08 kg, 0.8kg ☐

3. 0.25 kg, 350 g, 0. 20 kg, 375 g ☐

ÀṢEWÒ 5 / EXERCISE 5:

If each box weighs 250 g, copy and complete the table below	**Bí àpótí kọọkan bá wọn grámù 250, ṣàdàkọ àti ṣeparí itẹ yi**

Number of boxes/ Iye àwọn àpótí	1	3		5		8	
Weight of boxes/ Ìwọn àwọn àpótí	250g		1000g		2500g		125 g

What decimal fraction of 1 kg is:	**Ẹsẹ mélo nínú ọkẹgrámù kan ní:**

1. 800 g — 0.8 kilogram/ Odo ese mejo kg
2. 550 g
3. 750 g
4. 500 g

MODULE 16

TIME MEASUREMENT
ÈTÒ ÀKÓKÒ WÍWỌN

TIME MEASUREMENT	**ÈTÒ ÀKÓKÒ WÍWỌN**
TIME	**ÀKÓKÒ**
SECOND	**ÌṢÍSẸ**
MINUTE	**ÌṢẸJÚ**
HOUR	**WÁKÀTÍ**

60 Seconds	60 ìṣísẹ (ẹfà-ìdì ìṣísẹ)	1 ìṣẹjú (iṣẹjú kan)
60 minutes	60 ìṣẹjú (ẹfà-ìdì ìṣẹjú)	1 wákàtí (wákàtí kan)
24 hours	24 wákàtí (èjì-ìdì l'ẹrin wákàtí	1 ọjọ
7 days	7 ọjọ (ọjọ meje)	1 ọsẹ
30 days	30 ọjọ (ìdì mẹta ọjọ)	1 oṣù
4 weeks	4 ọsẹ (ọsẹ mẹrin)	1 oṣù
12 months	12 oṣu (oṣù méjìlá, ìkan-ìdì l'éjì oṣù)	1 ọdún
365 days	365 ọjọ (ẹta ọrún àt'ẹfà ìdì l'árun ọjọ)	1 ọdún
366 days	366 ọjọ (ẹta ọrún àt'ẹfà-dì l'ẹfà ọjọ)	1 ọdún-lé
1 Century	100 ọdún (ọrún ọdún *tàbí* ọgọrun ọdún)	1 ọrún-dún

TRADITIONAL
ÈTÒ AKÓKÒ WÍWỌN (ÌBÍLẸ)

Ogọnjọ òru	period from around 11 p.m. to around 3 a.m
Àkúkọ àkọkọ	period between 3 a.m. and 4 a.m.
Àfẹmọnjú	dawn: period between 4 a.m. and 6 a.m.
Ìdájí	early morning: period between 5 a.m. and 6 a.m.
Ìdákọmu	early morning: period between 6 a.m. and 7 a.m.
Àárọ (òwúrọ)	period between 7 a.m. and 10 a.m.
Ìyálẹta	period between 10 a.m. and noon
Ọsán	period between 12 noon and 4 p.m.
Ìrọlẹ	period between 4 p.m. and 6 p.m.
Àṣálẹ	period between 6 p.m. and 9 p.m.
Alẹ	period between 9 p.m. and 11 p.m.

12-hour clock	**24-hour-clock**		**Agogo oníwákàtí (ìkan-ìdì l'èjì) méjìlá**	**Agogo oníwákàtí èjì-ìdì l'ẹ́rin**
7: 00 a.m.	07.00 hrs.		7: 00 àárọ	Wákàtí 07.00
4.30 p.m.	16.30 hrs.		4.30 ọ̀sán	Wákàtí 16.30
12.00 noon	12.00 hrs.		12.00 ọ̀ọ̀kanrí	Wákàtí 12.00
3.50 a.m.	3.50 hrs.		3.50 àárọ	Wákàtí 3.50

ÀṢEWÒ 1/ EXERCISE 1:

Change to seconds	**Ṣàyípadà sí ìṣísẹ**

1. 5 min./ ìṣẹ́jú 5

2. 2 min. 26 s/ ìṣẹ́jú 2, ìṣísẹ 26

ÀṢEWÒ 2/ EXERCISE 2:

Change to minutes and/or seconds	**Ṣàyípadà sí ìṣẹ́jú àti/tàbí ìṣísẹ**

1. 560 seconds/ ìṣísẹ 560

2. 2h 40 min wákàtí 2, ìṣẹ́jú 40

ÀṢEWÒ 3/ EXERCISE 3:

Change to weeks and days	**Ṣàyípadà sí ọ̀sẹ̀ òun ọjọ́**

1. 43 days/ ọjọ́ 43

2. 72 days/ ọjọ́ 72

MODULE 17

PERCENTAGES
ÀWỌN ÌDÁ-ỌRÚN

PERCENTAGES	ÀWỌN ÌDÁ-ỌRÚN
%	

10%	Ten percent	Ìdá-ọrún ọnà mẹwa
25%	Twenty five percent	Ìdá-ọrún ọnà éjì-dì l'árun
84%	Eighty four percent	Ìdá-ọrún ọnà ẹjọ-dì l'ẹrin

ÀLÀYÉ / EXPLANATION:

4 per cent means $\frac{4}{100}$ *or* 0.04	Ìdá-ọrún 4 jẹ́ $\frac{4}{100}$ *tàbí* 0.04
35 % = $\frac{35 \div 5}{100 \div 5} = \frac{7}{20}$	80 % = $\frac{80 \div 20}{100 \div 20} = \frac{4}{5}$
$\frac{1}{2} = \frac{1 \times 50}{2 \times 50} = \frac{50}{100}$ = 50 %	$\frac{1}{4} = \frac{1 \times 25}{4 \times 25} = \frac{25}{100}$ = 25 %

To change a fraction to a percentage, multiply by 100	Láti yí Ìdásíwẹ́wẹ́ sí ìdá-ọrún, ṣèsọdipúpọ̀ pẹ̀lú 100
$\frac{36}{60} = \frac{36}{60} \times \frac{100}{1}$ % = 60 %	$\frac{12}{15} = \frac{12}{15} \times \frac{100}{1}$ % = 80 %

ÀPẸRẸ 1/ EXAMPLE 1

1.	Express 0.25 as a percentage	Dá 0.25 ní ìdá-ọrún	Answer: 0.25 is equal to 25% Idahun: 0.25 jẹ́ ìdá-ọrún ejì-dì l'árun

ÀṢEWÒ 1/ EXERCISE 1

Express $\frac{24}{30}$ as a percentage	Dá $\frac{24}{30}$ ní ìdá-ọrún

ÀṢEWÒ 2/ EXERCISE 2

Change to fractions in their lowest terms		**Ṣàyípadà àwọn yi sí Ìdásíwẹ́wẹ́ tó kéré jù**	
1. 25% =		**2.** 52%	
3. 45%		**4.** 85%	
5. $12\frac{1}{2}$%		**6.** $63\frac{1}{3}$%	
7. $44\frac{5}{9}$%		**8.** $37\frac{1}{2}$%	

ÀṢEWÒ 3 / EXERCISE 3

Complete these tables	**Ṣèparí àwọn ìtẹ yi**

Tenths/Ida-idi	$\frac{1}{10}$		$\frac{4}{10}$				$\frac{7}{10}$		
Hundreths/ Iye lórí ọrún	$\frac{10}{100}$	$\frac{80}{100}$				$\frac{60}{100}$			
Percent/Ìdá-ọrún	10%			20%				70%	
Decimal / Ẹsẹ	0.10				0.3				0.7

ÀṢEWÒ 4 / EXERCISE 4

Replace ? by < , >, or =	**Ṣèrọpò ? pẹ̀lú < , >, tàbí =**

1.	3%	<	0.04	2.	25%		0.21
3.	85/100		0.58	4.	35%		0.35
5.	40/100		0.4	6.	0.52		52%
7.	70/100		0.7%	8.	0.95	?	94%

ÀṢEWÒ 5 / EXERCISE 5

Change these marks to percentages	**Ṣayipada àwọn máàkì yi sí Ìdá-ọ́rún**

1.	6 out of 10 6 nnú ìdì kan	=	60%	2.	8 out of 10 8 nnú idi kan	=	
3.	16 out of 20/ 16 nnú 20			4.	22 out of 25/ 22 nnú 25		
5.	13 out of 50/ 13 nnú 50			6.	19 out of 20/ 19 nnú 20		
7.	23 out of 25/ 23 nnú 25			8.	3 out of 4/ 3 nnú 4		

MODULE 18

RATIOS
ÀWỌN ÌBÙPÍN

RATIOS	**ÀWỌN ÌBÙPÍN**
UNIT RATIO	**ÌDÌWỌN ÌBÙPÍN**

A:B

To divide D in a ratio of A to B. Find the sum of the ratios A + B Divide D with the sum above D/A + B D/(A + B) is the unit ratio Each number is then used to Multiply D	Bí a bá fẹ pín nkan (D) ní ìbù A sí B A óò ro àwọn ìbù méji yi pọ: A + B A óò sì fi àròpọ yi pín D: D/A + B D/(A+B) ni **ÌDÍWỌN ÌBÙPÍN** A óò sì fi ìbù kọọkan sọ ìdìwọn yi di púpọ

ÀLÀYÉ / EXPLANATION:

QUESTION Ola and Ayo, his brother, have 12 oranges to share. If Ola'a share is to be twice his brother's (Ratio 2:1), how many oranges will each have?	ÌBÉÈRÈ: Ọlá àti Ayọ, àbúrò rẹ, ní 12 (ikan-diléjì) ọsàn. Bí ìpín ti Ọlá bá jẹ́ méjì sí ti ọkan ti àbúrò rẹ (Ìbùpín 2:1), Ọsàn mélo ni ìkànkan nínú wọn yóò ní?
ANSWER Every time Ola takes 2 oranges, Ayo takes 1. We will thus obtain a sharing pattern below:	ÌDÁHÙN Ìgbàkígbà tí Ọlá bá mú ọsàn méjì, Ayọ á mú ọsàn kan. A rí i wípé ìbùpín wọn yóò lọ báyi:

Ola's Share/ Ìbùpín ti Ọlá	Ayo's share/ Ìbùpín ti Ayọ	Total share/ Ìbùpín lápapọ
2	1	3
4	2	6
6	3	9
8	4	12

This way, Ola takes 8 oranges while Ayo takes 4. The 12 oranges hane been shared among the two brothers in a ration of 2 to 1 (Ratio 2:1) We see that ratio 8:4 is the same as ratio 2:1 in its simplest form: 1:2 = 2:4 = 3:6 = 4:8 = 5:10 = …..	A rí i wípé Ọlá mú ọsàn 8, nígbàtí Ayọ mú ọsàn 4. A ti pin ọsàn 12 náà laarín àwọn arákùnrin méji yi ní ìbùpín 2 sí 1(Ìbùpín 2:1) A rí i wípé ìbùpín 8:4 jẹyekan pẹ̀lú ìbùpín 2:1 ní ríro: 1:2 = 2:4 = 3:6 = 4:8 = 5:10 = …..

For example:	Fún àpẹrẹ:
Question: Divide 18 in a ratio of 4 to 3 to 2 Ans: (1) Add the ratios 4+3+2 = 9 (2) Divide 18 with the sum: 18/9 = 2 (3) Multiply each number with 2: 4 x 2 = 8; 3 x 2= 6; 2 x 2 = 4	Ìbéèrè: Pín 18 ní ìbùpin 4 sí 3 sí 2 Ìdáhùn: (1) Ro àwọn ìbù yi pọ: 4+3+2 = 9 (2) Fi àròpọ ìbù yi pín 18: 18/9 =2 (2 ni ìdíwọn ìbùpín yi (unit ratio) (3) Sọ 2 di púpọ pẹ̀lú 4 àti bẹẹbẹẹ lọ: 4 x 2 = 8; 3 x 2 = 6; 2 x 2 = 4

ÀṢEWÒ 1/ EXERCISE 1

Write the following ratios in their simplest form:	**Ṣàkọsílẹ àwọn ìbùpín yi ní ọnà tó rọ jù**

1. ~~₦~~30 to ~~₦~~ 60 = ☐

2. 10kg si 15 kg = ☐

3. 4 m to 20 m = ☐

4. 5m si 50 m = ☐

5. 15 min to 1h = ☐

6. Ọjọ 5 si ojọ 20 = ☐

7. 1 hr to 30 min = ☐

8. Ọjọ 3 si ọsẹ 6 = ☐

ÀṢEWÒ 2/ EXERCISE 2

Write the following ratios in their simplest form:	**Ṣàkọsílẹ àwọn ìbùpín yi ní ọnà tó rọ jù**

1. 3 : 6 = 1 : 2

2. 50 : 100 = ☐

3. 21 : 28 = ☐

4. 12 : 16 = ☐

5. 20 : 120 = ☐

6. 12 : 18 = ☐

ÀṢEWÒ 3 / EXERCISE 3

Find the number represented by each letter:	**Wá òòkà tí abidi kọọkan dúró fún:**

1. $\frac{3}{6} = \frac{6}{x}$

3 x **x** = 6 x 6 = 36

x = 36 / 3 = 12

2. $\frac{1}{3} = \frac{y}{21}$

3. $\frac{3}{4} = \frac{24}{u}$

4. $\frac{6}{10} = \frac{a}{30}$

5. $\frac{5}{t} = \frac{45}{54}$

6. $\frac{7}{21} = \frac{r}{63}$

ÀṢEWÒ 3 / EXERCISE 3

The sides of a rectangle are in the ratio of 3:5. Complete the chart below	**Àwọn ẹgbẹ èèyà onígunmẹrin wà ní ìbùpín 3:5. Ṣèparí ìtẹ ìsàlẹ yi**

Shorter side/ ẹgbẹ kúkúrú	3 cm.	6 cm.		12 cm.		18 cm.	
Longer side/ ẹgbẹ gígùn	5 cm.		15 cm.		30 cm.		45 cm.

MODULE 19

AVERAGES
ÈTÒ ÀWỌN ÌRÒPÍN

AVERAGES	**ÈTÒ ÀWỌN ÌRÒPÍN**
To find the average of **a,b**, and **c** Add **a, b** and **c** Use the total of the numbers to divide the sum.	Bi a bá fẹ wá àròpín àwọn òòkà **a,b,**àti **c** A níláti ṣàròpọ **a, b** ati **c** A óò sì fi iye àwọn òòkà yi pín àròpọ yi

ÀPẸRẸ / EXAMPLE:

Question: Find the average of 10,11,12,13,14 = 60 Answer: (1) Add all the numbers together 10+11+12+13+14 (2) Divide this sum by the number of the sums: 60/5 = 12	Ìbéèrè: Ṣàròpín àwọn òòkà yi 10,11,12,13,14 Ìdáhùn: (1) Ṣàròpọ gbogbo àwọn òòkà náà 10+11+12+13+14 = 60 (2) Fi iye àwọn òòkà yi pín 60: 60/5 = 12 (12 ni àròpín àwọn òòkà náà)

ÀṢEWÒ 1 / EXERCISE 1

What is the average age of these children?	**Kíni àròpín iye ọdún àwọn ọmọ yi?**
1. Bola - 11 yrs, 3 mos Ayo - 12 yrs, 3 mos Dele - 10 yrs, 9 mos Ola - 10 yrs, 6 mos	Bọlá - ọdún 11, oṣù 3 Ayọ - ọdún 12, oṣù 3 Délé - ọdún 10, oṣù 9 Ọlá - ọdún 10, oṣù 6
2. Titi - 8 yrs, 3 mos Fola - 6 yrs, 3 mos Tosin - 5 yrs, 9 mos Akin - 7 yrs, 6 mos	Tití - ọdún 8, oṣù 3 Fọlá - ọdún 6, oṣù 3 Tósìn - ọdún 5, oṣù 9 Akin - ọdún 7, oṣù 6

MODULE 20

EXPONENTS
ÀWỌN EDI-ÒÒKÀ

EXPONENTS		ÀWỌN EDI-ÒÒKÀ
	A^B	
A raised to the power B	A^B	**A elédi B**

1^1	One raised to the first power	Ení elédi kan
1^2	One raised to the second power	Ení elédi méjì
2^3	Two raised to the third power	Èjì elédi mẹta
4^5	Four raised to the fifth power	Ẹrin elédi márun
5^6	Five raised to the sixth power	Àrún elédi mẹfa
10^1	Ten raised to the first power	Ìdì elédi kan
10^9	Ten raised to the ninth power	Ìdì elédi mẹsan
10^{20}	Ten raised to the twentieth power	Ìdì elédi éjì-ìdì
10^{23}	Ten raised to the twenty third power	Ìdì elédi éjì-ìdì l'ẹta
20^{10}	Twenty raised to the tenth power	Èjì-ìdì elédi ọkan-ìdì
100^{10}	One hundred raised to the tenth power	(Ọkan) Ọrún elédi ọkan-ìdì
1000^{10}	One raise to the tenth power	(Ọkan) ọkẹ elédi ọkan-ìdì

For example:
6.02 x 10^{23}: Ẹfà ẹsẹ òdo, èjì lọnà ìdì elédi éji-ìdì l'ẹta
106.236 x 20^{23}: ọkan ọrún l'ẹfà ẹsẹ èjì, ẹta, ẹfà lọnà éjì-dì elédi éjì-ìdì l'ẹta

ÀṢEWÒ 1/ EXERCISE 1

Give names to the following numbers		**Dárúko fun àwọn ooka yi**	
	ENGLISH NAMES		**ORUKỌ YORUBA**
1.		2^1	
2.		4^2	
4.		7^5	Èje elédi márun
5.		5^6	
6.		10^2	
7.		10^{20}	
8.		10^{23}	
9.		20^2	
10.		30^{23}	

ÀṢEWÒ 2 / EXERCISE 2

Give names to the following numbers		**Dárúkọ fun àwọn ooka yi**	
	ENGLISH NAMES		**ÀWỌN ORÚKỌ TI YORÙBÁ**
1.	Seven point zero zero times ten to the third power	7.00×10^3	Èje ẹsẹ òdo òdo lọnà ìdì elédi mẹta
2.		7.44×10^{31}	
3.		7.56×10^{34}	
4.		5.17×10^{15}	
5.		8.14×10^{22}	
6.		5.23×10^{15}	
7.		7.19×10^{45}	
8.		23.02×10^{25}	
9.		213.02×10^{25}	
10.		213.02×20^{25}	

ÀṢEWÒ 3 / EXERCISE 3

Give answers to the following questions	**Ṣèdáhùn sí àwọn ìbéèrè yi**

1.	2^1	=		**6.**	4^1	=	
2.	2^3	=		**7.**	4^2	=	
3.	3^2	=	3 x 3 = 9	**8.**	6^1	=	
4.	3^3	=		**9.**	4^3	=	
5.	3^4	=		**10.**	5^2	=	

MODULE 21

SQUARES AND SQUARE ROOTS
ÀWỌN ÒÒKÀ ELÉDIMÉJÌ ÀTI ÒÒKÀ ONÍRÌNMÉJÌ

ROOTS	**IRÌN**
SQUARE ROOT	**IRÌNKEJÌ**
SQUARES	**ÀWỌN ELÉDIMÉJÌ**
SQUARE NUMBERS	**ÀWỌN ÒÒKÀ ONÍRÌNMÉJÌ**

$\sqrt{}$
$\mathbf{A = \sqrt{B}}$

$\mathbf{A = \sqrt{B}}$	**A** is the square root of **B**: **A** jẹ **Irìn B** kéjì B is the number whose root is to be found If we multiply **A** with **A**, we will get **B.** **A x A = B**	**A** jẹ **Irìn B** kéjì **B** sì ni **ẹsún** ti a nwa ìrìn rẹ Bí a bá fi **A** sọ **A** di pupọ, **A** óò ní **B:** **A x A = B**
$\mathbf{A = \sqrt[3]{B}}$	**A** is the cube root of **B;** **A x A xA = B**	**A** jẹ irìn **B** lọnà kẹta **A x A xA = B**
$\mathbf{A = \sqrt[n]{B}}$	**A** is the $\mathbf{n^{th}}$ root of **B**: **A x A x A x A ……..= B** The number on top of the sign tells us the number of times A will multiply itself to get B $\mathbf{A = \sqrt[n]{B}}$ Therefore $\mathbf{B = A^n}$; (B equals **A** raised to the power of **n**) $\mathbf{n = Log_A B}$ n is the Napierian logarithm of **B**	**A** jẹ irìn **B** lona **n**: **A x A x A x A ……..= B** **Òòkà tó wà lòkè àmìn irìn yì ló sọ iye ẹrẹ tí a óò fi A sọ ara wọn di púpọ láti ní B.** $\mathbf{A = \sqrt[n]{B}}$ **Nítorína** $\mathbf{B = A^n}$; **(B** jẹ ẹsún **A** elédi **n)** $\mathbf{n = Log_A B}$ **n** sì ni iye-edi Napia. **B** ni ẹsún rẹ

ÀLÀYÉ / EXPLANATION:

1	x	1	=	1
2	x	2	=	4
3	x	3	=	9
4	x	4	=	16

1,4,9,16 are SQUARE NUMBERS	1,4,9,16 jẹ ÒÒKÀ ONÍRÌNMÉJÌ

ÌWÉ-IṢẸ́ ÌKỌ́NI NÍ ÌṢIRÒ L'ÉDÈE YORÙBÁ

TABLE OF SQUARES	ÌTẸ ÀWỌN ÒÒKÀ ELÉDIMÉJÌ

X	1	2	3	4	5	6	7	8	9	10
1	1									
2		4								
3			9							
4				16						
5					25					
6						36				
7							49			
8								64		
9									81	
10										100

ÀLÀYÉ 2 / EXPLANATION 2:

3 x 3 = 9, therefore 3 is the square root of 9	3 x 3 = 9, nítorína 3 jẹ́ irìnkejì 9
4 x 4 = 16, therefore 4 is the square root of 16	4 x 4 = 16, nítorína 4 jẹ́ irìnkejì 16
5 x 5 = 25, therefore 5 is the square root of 25	5 x 5 = 25, nítorína 5 jẹ́ irìnkejì 25
6 x 6 = 36, therefore6 is the square root of 36	6 x 6 = 36, nítorína 6 jẹ́ irìnkejì 36

3 times 3 is 3 squared is 9	3 x 3 = 3^2 = 9	3 lọnà 3 jẹ́ 3 elédiméjì jẹ́ 9
4 times 4 is 4 squared is 16	4 x 4 = 4^2 = 16	4 lọnà 4 jẹ́ 4 elédiméjì jẹ́ 16
5 times 5 is 5 squared is 25	5 x 5 = 5^2 = 25	5 lọnà 5 jẹ́ 5 elédiméjì jẹ́ 25
6 times 6 is 6 squared is 36	6 x 6 = 6^2 = 36	6 lọnà 6 jẹ́ 6 elédiméjì jẹ́ 36

ÀLÀYÉ 3 / EXPLANATION 3:

The square root of 9 is 3	$\sqrt{9}$ = 3	Irìnkejì 9 jẹ́ 3
The square root of 16 is 4	$\sqrt{16}$ = 4	Irìnkejì 16 jẹ́ 4
The square root of 25 is 5	$\sqrt{25}$ = 5	Irìnkejì 25 jẹ́ 5
The square root of 36 is 6	$\sqrt{36}$ = 6	Irìnkejì 36 jẹ́ 6

MODULE 22

FACTORS
ÀWỌN ÌFIPÍN

FACTORS	**ÌFIPÍN**
COMMON FACTORS	**ÌFIPÍN ÀJỌNÍ**
HIGHEST COMMON FACTOR (HCF)	**ÌFIPÍN NLA ÀJỌNÍ (FNA)**

GREATEST (HIGHEST) COMMON FACTOR: The **largest whole number** that divides evenly into each of a set of numbers. To find the GCF of 2 numbers: 36 and 54 The factors of 36: 1,2,3,4,6,9,18,36 The factors of 54: 1,2,3,6,9,18,27,54 The GCF of 36 and 54 is 18	**ÌFIPÍN NLA ÀJỌNÍ:** Òòkà tó tóbi jù tó jẹ́ ìfipín àwọn ìjọ òòkà kan. Bí a bá fẹ wá **Ìfipín-nlá àjọni** àwọn òòkà: 36 àti 54 Àwọn ìfipín 36: 1,2,3,4,6,9,18,36 Àwọn ìfipín 54: 1,2,3,6,9,18,27,54 Ìfipín nlá àjọni 36 ati 54 jẹ́ 18

ÀLÀYÉ / EXPLANATION

12 ÷ 2 = 6	12 = 2 x 6
12 ÷ 6 = 2	12 = 6 x2
2 and 6 are factors of 12	**2 àti 6 jẹ́ ìfipín 12**

A factor divides a number without a remainder	Ìfipín òòkà má npín òòkà lái ní ìṣẹ́kù
2 is not a factor of 11 because 11 ÷ 2 leaves a remainder 1	2 kìí ṣe ìfipín 11 nitori 11 ÷ 2 ni ìṣẹ́kù 1

ÀṢEWÒ 1/ EXERCISE 1

Find all the factors	**Wá gbogbo àwọn ìfipín**

1.	12	1,2,3,4,6	**2.**	16		**3.**	24	
4.	32		**5.**	40		**6.**	45	
7.	19		**8.**	29		**9.**	41	

ÀṢEWÒ 2 / EXERCISE 2

Is the first number a factor of the other two numbers? Give a reason for your answer	**Nje òòkà kiní nse ìfipín àwon òòkà méji to tele e. So ìdì èsì re**

1. 2: 4,8 — Yes: 2 divides 4 and 8 without a remainder

Bẹẹni: 2 pín 4 àti 8 láì sí ìṣẹkù

2. 6: 12, 18

3. 7: 56, 49

4. 9: 63,80

5. 7: 41,35

6. 9: 72,81

7. 3: 16,21

8. 4: 32,28

ÀPẸRẸ / EXAMPLE

Find the common factors of 24 and 36	Wá àwọn ìfipín ajọni 24 àti 36

Factors of 24/àwọn ìfipín 24:						Factors of 36/àwọn ìfipín 36:				
24	=	1	x	24		36	=	1	x	36
		2	x	12				2	x	18
		3	x	8				3	x	12
		4	x	6				4	x	9
		6	x	4				6	x	6
		8	x	3				9	x	4
		12	x	2				12	x	3
		24	x	1				18	x	2
								36	x	1

The common factors of 24 and 36 are (in red)	Àwọn ìfipín àjọní 24 àti 36 jẹ́ (ní pupa):	1, 2, 3, 4, 6, 12
The highest of these common factors is:	Ìfipín tó tóbi jù lọ nínú àwọn Ìfipín yi ní:	12
Therefore the Highest Common Factor (HCF) of 24 and 36 is:	Nítorína ìfipín nlá àjọní ti 24 àti 36 ni:	12

ÀṢEWÒ 2/ EXERCISE 2

Find the Highest Common Factor of	**Wá ìfipín nlá àjọni ti:**

1. 15 and 21

15: 1, 3, 5, 15
21: 1, 3, 7, 21

HCF is 3/ INA jẹ́ 3

2. 25 and 30

3. 16 and 28

4. 21 and 28

5. 40,24,12

6. 12,15,20

MODULE 23

MULTIPLES
ÀWỌN ÌLỌ́PO

MULTIPLE	**ÌLỌPO**
LEAST COMMON MULTIPLE (LCM)	**ÌLỌPO KÉKERÉ ÀJỌNÍ (LKA)**
LEAST COMMON DENOMINATOR (LCD)	**ÌFIPÍN KÉKERÉ ÀJỌNÍ (FKA)**

LEAST COMMON MULTIPLE (LCM) The smallest number (not zero) that is a multiple of a set of numbers To find the LCM of 2 numbers: 3 and 4 Multiples of 3: 0,3,6,9,12,15,18,21… Multiples of 4: 0,4,8,12,16,2,24,28…. The LCM of 3 and 4 is 12	**ÌLỌPO KÉKERÉ ÀJỌNÍ (LKA)** Òòkà tó kéré jù (lái ṣe òdo) tó jẹ́ ẹ̀sún àwọn ìjọ òòkà kan. Bí a bá fẹ wá **Ìlọpo Kékeré Àjọni** àwọn òòkà 3 ati 4: Àwọn Ìlọpo 3: 0,3,6,9,12,15,18,21… Àwọn Ìlọpo 4: 0.4,8,12,16,2,24,28…. Ìlọpo kékeré àjọní **(LKA)** 3 and 4 jẹ́ 12

LEAST COMMON DENOMINATOR (LCD) The least common denominator of a set of fractions is the lowest "bottom" number to which each of the fractions can equal. To find the LCD of 2 fractions: ½ and 1/3: Find the multiples of 2: 2,4,6,8,10,12 Find the multiples of 3: 3,6,9,12 The LCD of ½ and 1/3 is 6 because ½ = 3/6 and 1/3 = 2/6	**ÌFIPÍN KÉKERÉ ÀJỌNÍ (FKA)** **Ìfipín-kékeré àjọni** àwọn Ìdásíwẹ́wẹ́ (fractions) ni Ìlọpo kékeré àjọni gbogbo àwọn ìfipín àwọn Ìdásíwẹ́wẹ́ yi. Bí a bá fẹ wá ìfipín kékeré àjọni àwọn Ìdásíwẹ́wẹ́ meji: ½ ati 1/3: Wá àwọn ìlọpo 2: 2,4,6,8,10,12 Wá àwọn ìlọpo 3: 3,6,9,12 Ìfipín kékeré àjọni ½ ati 1/3 ni 6 nítorí ½ = 3/6 àti 1/3= 2/6

ÀPẸRẸ / EXAMPLE:

Find the first 10 multiples of 2	Wá ìlọpo 10 àkọkọ ti 2

2	x	1	=	2
2	x	2	=	4
2	x	3	=	6
2	x	4	=	8
2	x	5	=	10
2	x	6	=	12
2	x	7	=	14
2	x	8	=	16
2	x	9	=	18
2	x	10	=	20

The first 10 multiples of 2 are:	Àwọn Ìlọpo mẹwa àkọkọ ti 2 ni:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20	

Find the first ten multiples of 2 and 3	Wa ìlọpo mẹwa (10) àkọkọ ti 2 ati 3

The first 10 multiples of 2/ Ìlọpo mẹwa àkọkọ ti 2:					The first 10 multiples of 3/ Ìlọpo mẹwa àkọkọ ti 3:				
2	x	1	=	2	3	x	1	=	3
2	x	2	=	4	3	x	2	=	6
2	x	3	=	6	3	x	3	=	9
2	x	4	=	8	3	x	4	=	12
2	x	5	=	10	3	x	5	=	15
2	x	6	=	12	3	x	6	=	18
2	x	7	=	14	3	x	7	=	21
2	x	8	=	16	3	x	8	=	24
2	x	9	=	18	3	x	9	=	27
2	x	10	=	20	3	x	10	=	30

The common multiples of 2 and 3 are (in red):	Àwọn ìlọpo àjọní 2 ati 3 jẹ (ní pupa):	6, 12, 18, 24, 30, …
The smallest of these common multiples is:	Ìlọpo tó kéré jù lọ nínú àwọn ìlọpo àjọni yi ni:	6
Therefore the Least Common Multiple (L.C.M.) of 2 and 3 is:	Nítorína I**L**ọpo **K**ékeré **À**jọni **(L.K.A)** ti 2 ati 3 ní:	6

ÀṢEWÒ 1/ EXERCISE 1

Find the Least Common Multiple of	**Wá Ìlọpo kékeré àjọni ti:**

1. 2, 5

2: 2,4,6,8,10,12,14,16,18,20
5: 5,10,15,20,25,30,35

The L.C.M. of 2 and 5 is 10
L.K.A ti 2 ati 5 ni: 10

2. 4, 6

3. 3,8

4. 10,15

MODULE 24

MONEY: PROFIT AND LOSS
OWÓ: ÈRÈ ÀTI ÀDÁNÙ

PROFIT AND LOSS	**ÈRÈ ÀTI ÀDÁNÙ**
MONEY	**OWÓ**
PRODUCT	**ỌJÀ**
SALE	**TÍTÀ**
PURCHASE	**RÍRÀ**
COST	**ÌNÁ**
COST PRICE	**IYE ÌNÁ**
SALE	**ÌTÀ**
SELLING PRICE	**IYE TÍTÀ**
PERCENTAGE PROFIT	**ÈRÈ LÓRÍ ÌDÁ-ỌRÚN**
PERCENTAGE LOSS	**ÀDÁNÙ LÓRÍ ÌDÁ-ỌRÚN**
COMISSION AND DISCOUNT	

PROFIT: When a product is sold at a higher price than it cost, profit is made. LOSS: If a product is sold at a lower price than it cost, a loss is made.	ÈRÈ: Bí a bá ta ọjà ju iye tó ná wa láti rà á, a jẹ èrè ÀDÁNÙ: Bí a bá ta ọjà dín ní iye tó ná wa láti rà á, a ti ní àdánù.
PROFIT AND LOSS PERCENT: Profit or loss is always expressed as a percentage of the cost price:	ÈRÈ ÀTI ÀDÁNÙ LÓRÍ ÌDÁ-ỌRÚN: A má nṣe àlàyé èrè tàbí àdánù gẹgẹbí ìdá-ọrún lórí **iye ìná (iye tí a ná)**:

Cost price of an article	Iye ìná ọjà kan	₦ 30.00
Selling price of the article	Iye títà ọjà yi	₦ 33.00
Profit	Èrè	= Selling price – Cost price/ = Iye tita - Iye ina: = ₦ 33.00 – ₦ 30.00= ₦ 3.00
Percentage profit	Ìdá-ọrun èrè	= ₦ 3 x 100 % ₦ 30 = 1 x 100 % 10 1 = 10%

ÀPẸRẸ / EXAMPLE:

A book bought for ₦ 20 was sold at a loss of 15%. What is the selling price?	Ìwé tí a rà ní ₦ 20, a tà á ní àdánù ìdá-ọrún 15. Èló ni iye títà ìwé ná à

Percentage loss	Oye ìdá-ọrún àdánù	= 15%
Loss	Oye àdánù	= $\frac{15}{100}$ x $\frac{₦\ 20}{1}$ = ₦ 3
Selling price of book	Oye títà ìwé	= ₦ 20 - ₦ 3 = ₦ 17

ÀṢEWÒ 1/ EXERCISE 1

1.	The cost price of an article is ₦ 4.30 and the selling price is ₦ 5.10. Find the profit or loss	Oye ìná ọjà kan jẹ ₦ 4.30, iye títà rẹ sì jẹ ₦ 5.10. Wá èrè tàbí àdánù rẹ	
2	The selling price of a chair is ₦ 59.50 and the cost price is ₦ 70.22. find the gain or loss	Oye títà aga kan jẹ ₦ 59.50. Iye ìná rẹ si jẹ ₦ 70.22. Wá èrè tàbí àdánù rẹ	

ÀṢEWÒ 2/ EXERCISE 2

Complete this table.	**Ṣèparí (Ṣe ìparí) ìtẹ yi.**

	Cost Price/ Oye Ìná	Selling price/ Oye Títà	Profit/ Èrè	Profit %/ Ìdá-ọrún èrè
1	₦ 10.00	₦ 13.00	₦ 3.00	30%
2	₦ 15.00	₦ 18.00		
3	₦ 50.00			20%
4	₦ 25.00		₦ 11.00	
5	₦ 200.00			10%
6	₦ 450.00		₦ 90.00	
7		₦ 440.00	₦ 40.00	
8		₦ 56.00	₦ 6.00	

MODULE 25

MONEY: COMMISSION AND DISCOUNT
OWÓ: LÀÁDÀ ÀT'ẸDÍNWÓ

COMISSION AND DISCOUNT	**LÀÁDÀ ÀT'ẸDÍNWÓ**
MONEY **COMMISSION**	**OWÓ** **LÀÁDÀ**
DISCOUNT	**ẸDÍNWÓ**
PRODUCT	**ỌJÀ**
PURCHASE	**RÍRÀ**
COST	**ÌNÁ**
COST PRICE	**OYE ÌNÁ**
PAYMENT	**ẸSANWÓ**
SALE	**ÌTÀ**
SELLING PRICE	**OYE TÍTÀ**

COMMISSION: Commission is a form of payment to an agent for services rendered. Payments often will be calculated on the basis of a percentage of the goods sold.	LÀÁDÀ: Làádà ni irú owó tí a san fún alágbàtà tàbí alábaṣe fún iṣẹ rẹ. Ìṣirò ẹsanwó yi dá lórí ìdá-ọrún iye tí a ta ọjà.
DISCOUNT: Discount is a reduction to a basic price of goods or services, Reasons for discount may include increasing sales, moving out-of-date stock, or rewarding valuable customers. Discounts are calculated on the basis of a percentage of the selling price of the good.	ẸDÍNWÓ: Ẹdínwó ni iye owó tí a dín lára oye títa ọjà tàbí owó iṣẹ. Ìdí tí a fi nṣe ẹdínwó lè ṣe fún yíyára ta ọjà, fún títà ọjà tó kùtà, tàbí láti fi ìyọnú hàn fún oníbarà. A nṣèṣirò ẹdínwó lórí ìdá-ọrún oye títà ọjà

ÀPẸRẸ 1/ EXAMPLE 1:

Mr. Lawani sells books. He earns 5% commission on sales. How much does he earn on sales of N30,000.00?	Atàwé ni Ọgbẹni Láwànì. Ó ngba làádà ìdá-ọrún 5 lórí ọjà-títà. Èló ni làádà rẹ lórí ọjà-títà ₦30,000.00	
Sales	= ₦ 30,000.00	Oye ìtà
Percent commission	= 5%	Oye ìdá-ọrún làádà
Value of commission received	= 5/100 x ₦30,000.00	Oye làádà
	= ₦1,500.00	

ÀṢEWÒ 1/ EXERCISE 1

Copy and complete the table below		**Sadako ati Separi pepe isale yi**
	Value of goods/ Oye-ìtà ọjà	**% Commission/ Oye ìdá-ọrún Làádà**	**Oye Làádà**
A	**₦100**	**5%**	$\frac{5}{100}$ x $\frac{₦100.00}{1}$ = **₦5.00**
B	**₦200**	**3%**	
D	**₦240**	**10%**	
E	**₦300**	**9%**	

ÀPẸRẸ 2/ EXAMPLE 2:

The regular price of a shirt was ₦200. It was discounted to ₦150 . What is the percent discount of the price of this shirt.	Oye-títà ṣẹẹti kan jẹ ₦200. A gé owó rẹ si ₦150. Kini ìdá-ọrún ẹdínwó lórí iye- títà ṣẹẹti yi

Regular price of shirt	= ₦200	Iye-títà ṣẹẹti gan
Price after discount	= ₦150	Iye-títà lẹhìn ẹdínwó
Discount	= ₦200 – N150 = N50	Ẹdínwó
Percent discount	= $\frac{\text{Discount}}{\text{Selling Price}}$ x 100%	ìdá-ọrún ẹdínwó
	= $\frac{₦50}{₦200}$ x 100%	

ÀṢEWÒ 1/ EXERCISE 1

Find how much is paid on each article after allowing a discount shown	**Wá oye tí a san fún ìkànkan àwọn ọjà yi lẹhìn iye ẹdínwó tí a fihan**

	Price/Iye-títà	**Discount %/ Ìdá-ọrún Ẹdínwó**	**Amount paid/ Iye sísan lóri ọjà**
A	**~~₦~~100**	**5%**	**~~₦~~100 – (N100 x 5 / 100)** **= ~~₦~~95**
B	**~~₦~~200**	**3%**	
D	**~~₦~~240**	**10%**	
E	**~~₦~~300**	**9%**	

MODULE 26

MONEY: SIMPLE AND COMPOUND INTEREST
OWÓ: ÈLÉ ÀTI ÈLÉ-ÈLÉ

MONEY	**OWÓ**
SIMPLE INTEREST	**ÈLÉ**
COMPOUND INTEREST	**ÈLÉ-ÈLÉ**
PRINCIPAL	**ẸYÁ-OWÓ (ẸYÁWÓ)**
AMOUNT TO BE REPAID	**ẸSAN-OWÓ**
INTEREST	**ÈLÉ**
PERCENTAGE	**ÌDÁ-ỌRÚN**

SIMPLE INTEREST Simple Interest: Interest paid only on the original principal (money borrowed) When you know the principal amount, the rate and the time. The amount of interest can be calculated by using the formula: I = Prt Using the equation above, if N1000.00 is borrowed with a rate of 5.0% for a 10 year period of time. The interest to be paid will be: I = N1,000 x 5.0 /100 x 10 = N500.00	**ÈLÉ** Èlé: Iye owó tí a san lórí ẹyá-owó (ẹyá-owó = ẹyáwó: owó tí a yá) Bí a bá mo iye ẹyá-owó (P), tí a sì mọ iye ìdá-ọrún (percentage) tí a níláti san lórí owó yi (r); àti iye ọdún tí a óò fi sán a (t). A lè mọ iye èlé (I) tí a óò san bí a bá lo ọmì (equation) yi: I = Prt Fún àpẹrẹ àti lo ọmì òkè yi, bí a bá yá ₦1,000, ti ìdá-ọrún sì jẹ́ 5.0%, tí a sì yá owó yi fún ọdún mẹwa, oye èlé tí a óò san yí óò jẹ́: I = ₦1,000 x 5.0 /100 x 10 = ₦500.00

ÀPẸRẸ 1/ EXAMPLE 1:

Find the simple interest on N100 for five years at 3% per annum:	Wá èlé lórí ₦100 fún ọdún márun lórí ìdá-ọrún 3 lọdọdún
Simple interest on N100 for 1 year at 3% = N3.	Èlé lóri ₦100 fún ọdún kan lórí ìdá-ọrún 3 = ₦ 3
Simple interest on ₦100 for 5 years at 3% = ₦3 x 5 = ₦15	Èlé lóri ₦100 fún ọdún márun lórí ìdá-ọrún 3 lọdọdún: = ₦3 x 5 = ₦15

ÀPẸRẸ 2 / EXAMPLE 2:

Find the amount to be repaid on ₦200 for 4 years at 3% interest:	Wá oye tí a óò san padà (ẹsan-owó) lórí ẹyáwó ₦200 fún ọdún 4 lórí èlé 3% lọdọdún
Simple interest on N100 for 1 year at 3% = N3.	Èlé lórí ₦100 fún ọdún kan lórí ìdá-ọrún 3 lọdúnkan = ₦3
Simple interest on N200 for 1 year at 3% = ₦3 x 200 = ₦ 6 100	Èlé lórí ₦200 fún ọdún kan lórí ìdá-ọrún 3 lọdúnkankan = ₦ 6
Simple interest on N200 for 4 years at 3% = ₦3 x 200 x4 100 = ₦3 x 2 x 4 = ₦24 Amount = Interest + Principal = ₦24 + ₦200 = ₦ 224	Èlé lórí ₦200 fún ọdún 4 lórí ìdá-ọrún 3 = ₦3 x 200 x4 100 = ₦3 x 2 x 4 = ₦24 Ẹsanwó = Èlé + Ẹyáwó = ₦ 24 + ₦ 200 = ₦ 224

ÀṢEWÒ 1/ EXERCISE 1

Find the simple interest on:	**Wá èlé lórí:**

1	N100 at 4% per annum for 3 years	₦100 lórí ìdá-ọrún 4 fún ọdún 3	I = ₦100 x 4.0 /100 x 3 = N12.00
2	N100 at 6% per annum for 2 years	₦100 lórí ìdá-ọrún 6 fún ọdún 3	
3	N200 for 3 years at 3% per annum	₦200 fún ọdún 3 lórí ìdá-ọrún 3	
4	N800 for 3 years at 2% per annum	₦800 fún ọdún 3 lórí ìdá-ọrún 2	
5	N400 for 4 years at 6% per annum	₦ 400 fún ọdún 4 lórí ìdá-ọrún 6	

ÀṢEWÒ 2 / EXERCISE 2

Calculate the amount at the end of the periods stated below	**Ṣèṣirò ẹsan-owó lẹhin iye-ọdún tí a sọ ni ìsàlẹ**

		1	**2**	**3**
Principal	Ẹyáwó	₦100	₦400	₦300
Rate per annum	Ìdá-ọrún lọdọdún	3%	2.5%	3.5%
Time	Iye ọdún	6	3	5
Amount to be paid	Ẹsan-owó			

COMPOUND INTEREST	**ÈLÉ-ÈLÉ**
Compound interest is interest that is paid on both the principal and also on any interest from past years. It's often used when someone reinvests any interest they gained back into the original investment. For example, if I got 15% interest on my $1000 investment, the first year and I reinvested the money back into the original investment, then in the second year, I would get 15% interest on $1000 and the $150 I reinvested. Over time, compound interest will make much more money than simple interest. The formula used to calculate compound interest is:	**Èlé-èlé** jẹ́ **èlé** tí a san lórí ẹyáwó àti **èlé** tó kù láti ẹhìn wá. A nlo eléyi nígbàtí ènìà bá tún dá òwò kan ní okoòwò pẹ̀lú **èlé** tó ní lórí okoòwò rẹ ìṣáájú. Fún àpẹrẹ, bí mo bá gba èrè ìdá-ọrún ọnà ìkan-dì l'árun (15%) lórí ọkẹ Naira (₦1000.00) tí mo dá ibi-iṣẹ kan l'ókoòwò, ní ọdún èkinni, tí mo sì fi èlé yi dá ibi-iṣẹ náà lókoòwò. Ó jẹwípé, ní ọdún kejì, èmi yóò gba èlé ìdá-ọrún ọnà ìkan-dì lárun lórí ₦1000.00 àkọkọ pẹ̀lú èrè 15% míràn lóri ₦15 tí mo tún fi dá ilé-iṣẹ náà lókoòwò. Láìpẹ, èlé-èlé yóò mú èrè wá ju èlé lọ. Ìlànà-ìṣe tí a ngbà ṣírò èlé-èlé ni: $M = P(1 + i)^n$

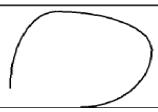
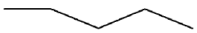
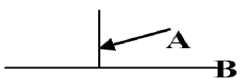
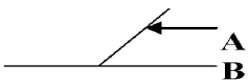
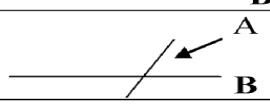
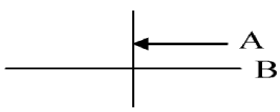
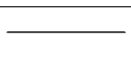
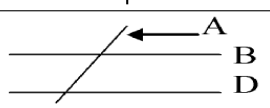
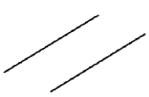
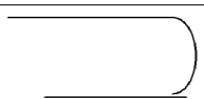
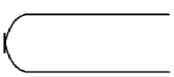
$M = P(1 + i)^n$	M ni ẹsan-owó - oye owó tí a jẹ, pẹ̀lú ẹyáwó
M is the final amount including the principal.	P ni ẹyáwó
P is the principal amount.	i sì ni iye èlé lọdọdún
i is the rate of interest per year.	n ni iye ọdún tí a dá okoòwò
n is the number of years invested.	
Applying the Formula	**Ní lílò ìlànà-ìṣe yi:**
Let's say that I have ₦1000.00 to invest for 3 years at rate of 5% compound interest.	Jẹki a sọ pé iye okoòwò jẹ ₦1000.00 fún ọdun mẹta (3 years), ki èlé-èlé orí rẹ sì jẹ 5%.
$M = 1000 (1 + 0.05)^3 = \$1157.62$.	$M = 1000 (1 + 0.05)^3 = \$1157.62$.
You can see that my $1000.00 is worth $1157.62 after 3 years.	Ẹ ri wípé ₦1000.00 ti di ₦1157.62 lẹhìn ọdún mẹta

MODULE 27

LINES AND CURVES
ÌLÀ ÀTI ÌLÀ-WÍWỌ

LINES AND CURVES	**ÌLÀ ÀTI ÌLÀ-WÍWỌ**
LINE	**ÌLÀ**
CURVES	**ÀWỌN ÌLÀ WÍWỌ**
GRAPHS	**ÌLÀ-ÌFÀ**

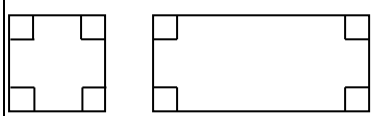
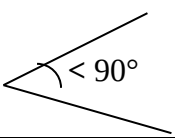
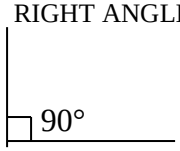
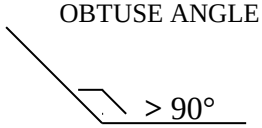
LINES AND GRAPHS - AWON ILA ATI ILA-IFA

	Ìlà Aláyùn			
	Ìlà Kíkán			Ìlà kíká
	Ìlà Lílò			Ìlà onínú
	Ìlà Títe			Ìlà oníkùn
	Ìlà Síse			Ìlà **A** so Ìlà **B** ní ògìdo. Ìlà A ni ìlà Ògìdo
	Ìlà Wíwo			Ìlà **A** so Ìlà **B**. Ìlà A ni Ìlà Eso
	Ìlà Títo			Ìlà **A** lu Ìlà **B**. Ìlà A ni ìlà Èlu
	Ìlà ogbà méjì ní ìró TÀBÍ Ìlà ogbà ìró méjì			Ìlà **A** lu Ìlà **B** ní ògìdo.
	Ìlà ?gbà méjì ní ìbú TÀBÍ Ìlà ogbà ìbú méjì			Ìlà A j? ìlà Èlu Ìlà A lu ìlà ogbà méjì - B ati D
	Ìlà ogbà méjì ní ìdà TÀBÍ Ìlà ogbà dídà méjì			Ìlà Orún-òkè
	Ìlà Orún-odo			Ìlà Orún-?tún
	Ìlà Orún-òsì			

MODULE 28

ANGLES, TRIANGLES, THE PYTHAGORAS RULE
ÀWỌN IGUN, ÀÀDÓ AT' ÒFI PÌTÁGÓRÀ

ANGLES	**ÀWỌN IGUN**
TRIANGLES	**ÀWỌN ÀÀDÓ**
ACUTE ANGLE	**IGUN MÍMÚ**
RIGHT ANGLE	**IGUN ỌTÚN**
OBTUSE ANGLE	**IGUN FÍFẸ̀**
ACUTE ANGLE TRIANGLE	**ÀÀDÓ ONÍGUN MÍMÚ**
RIGHT ANGLE TRIANGLE	**ÀÀDÓ ONÍGUN ỌTÚN**
OBTUSE ANGLE TRIANGLE	**ÀÀDÓ ONÍGUN FÍFẸ̀**
ISOSCELES TRIANGLE	**ÀÀDÓ AYAKÀTÀ**
AREA	**ÒRÒ**
DEGREE	**ÀLÉFÀ**
SQUARE	**ÀKÒDÌ**
SOLVE (A PROBLEM)	**ṢE OJÚTÙÚ (ṢOJÚTÙÚ) (IYỌNU)**
PYTHAGORAS RULE	**ÒFI PÌTÁGÓRÀ**

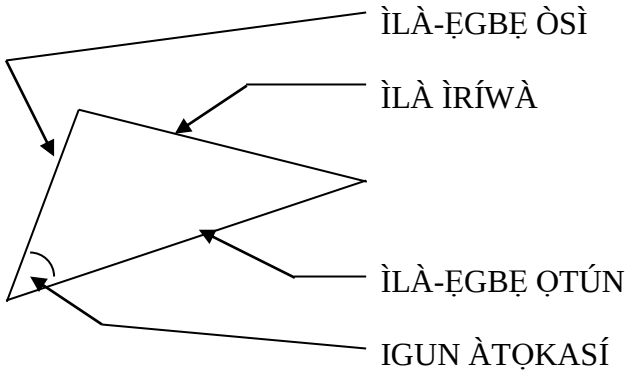
Each corner of a square or a rectangle forms an angle called a square corner or a right angle		Igun kọọkan lára àkòdì tàbí èèyà onígunmẹrin gígún ló ní àwọn igun mẹrin tó jẹ́ igun ọtún (ẹsán-di àléfà = 90°)
ACUTE ANGLE  < 90°	RIGHT ANGLE  90°	OBTUSE ANGLE  > 90°
Angles smaller than a right angle are called Acute Angles	Right Angle/ Igun ọtún = ẹsán-di àléfà = 90°	Angles bigger than a right angle are called Obtuse Angles
Àwọn igun tó kéré ju igun ọtún (ẹsán-di àléfà = 90°) ni a npè ní Igun mímú		Àwọn igun tó tóbi ju igun ọtún (ẹsán-di àléfà = 90°) ni a npè ní Igun fífẹ̀

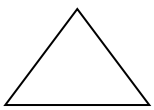
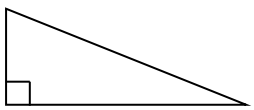
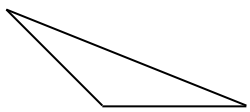
Igun Àtọkasí/ Reference angle: The angle of consideration/Igun tí a nperí rẹ

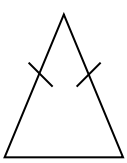
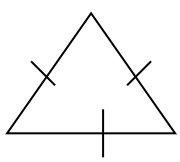
Ìlà Ìríwá/Opposite Line: Line directly opposite the reference angle/ Ìlà tó dojúkọ Igun Àtọkasí

Ìlà Ẹgbẹ ọtún: Line to the right of reference angle/ Ila apá ọtún igun àtọkasí

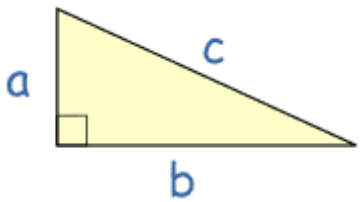
Ìlà Ẹgbẹ òsì: Line to the left of reference angle/ Ila apá òsì igun àtọkasí



ACUTE ANGLE TRIANGLE/ ÀÀDÓ ONÍGUNMÍMÚ	RIGHT ANGLE TRIANGLE/ ÀÀDÓ ONIGUN ỌTUN	OBTUSE ANGLE TRIANGLE/ ÀÀDÓ ONÍGUNFÍFẸ
		
All 3 angles less than 90^0 Igun mẹtẹta dín ní 90^0	One angle is 90^0 Igun kan jẹ́ 90^0	Igun kan ju 90^0

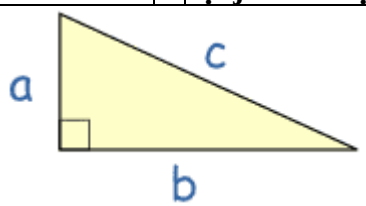
ISOSCELES TRIANGLE/ ÀÀDÓ AYAKÀTÀ	EQUILATERAL TRIANGLE ÀÀDÓ ÀÀRÒ
	
Two sides equal/ Gígùn ìhà méjì dọgba	All three sides equal/ Gígùn ìhà métẹẹta dọgba

PYTHAGORAS THEOREM:	OFI PÌTAGÓRÀ:
In a right angled triangle: the square of the hypotenuse is equal to the sum of the squares of the other two sides.	Ní àádó ọtún, òrò àkòdì tí a bá yà sí orí ìlà ìríwá igun ọtún jẹyekan pẹ̀lú àpapọ òrò àkòdì tí a bá yà sí orí àwọn ìlà ẹgbẹ méjèèjì



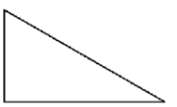
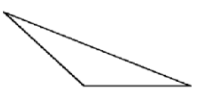
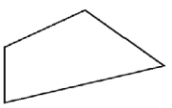
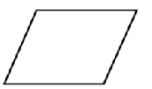
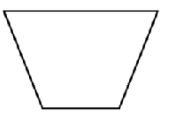
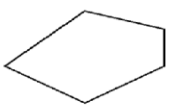
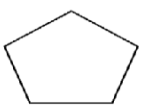
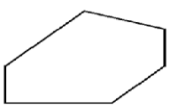
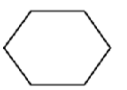
$$a^2 + b^2 = c^2$$

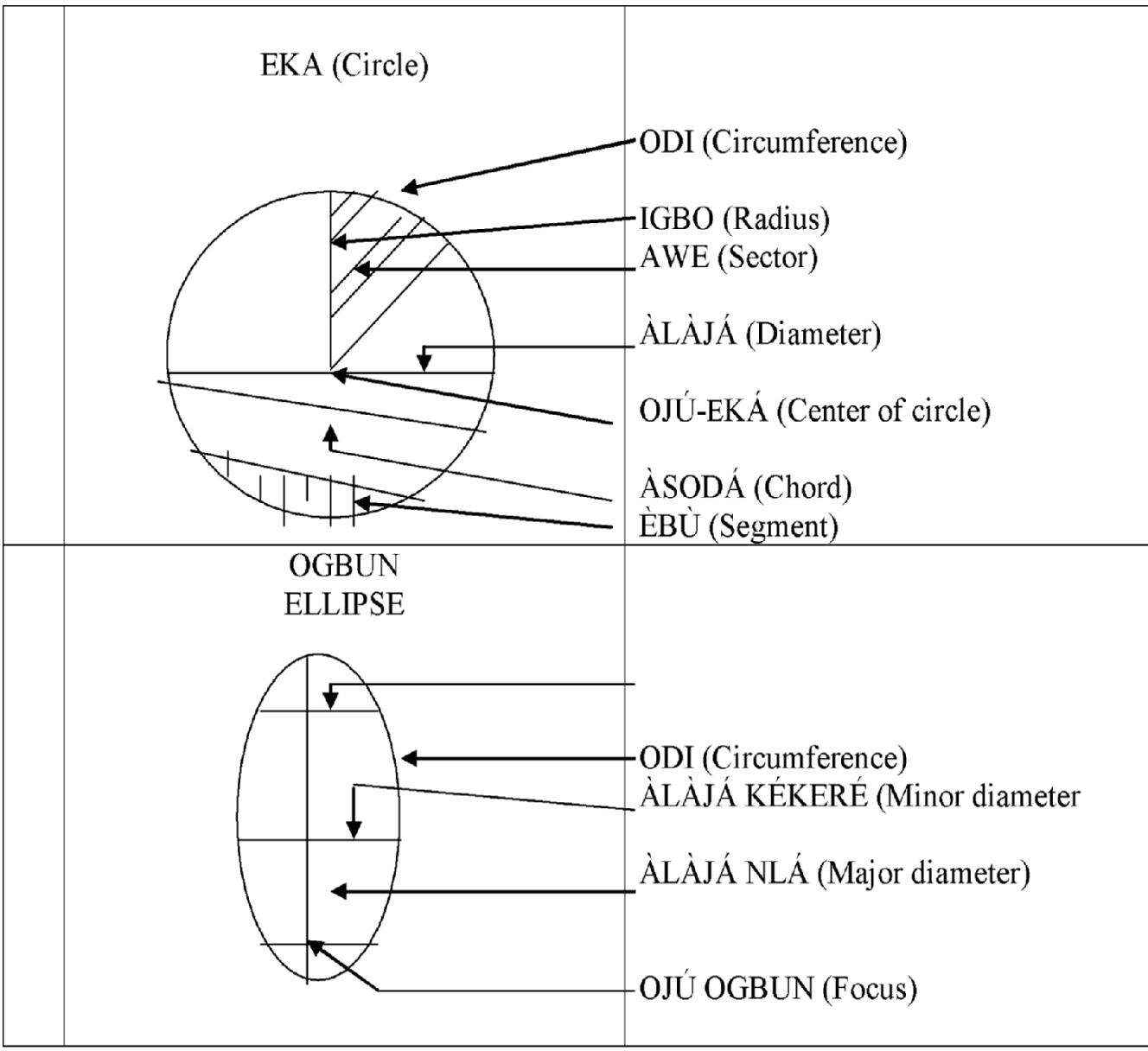
ÀṢEWÒ / EXERCISE

Solve these Triangles		**Ṣojútùú àwọn Àádó yi**
		
a	b	c
3	4	a = 3, a^2 = 9 b = 4, b^2 = 16 $c^2 = a^2 + b^2 = 9 + 16 = 25$ c = √**25 = 5**
5	12	
1.5		2.5

MODULE 29
2-DIMENSIONAL SHAPES
ÀWỌN ÈÈYÀ OLÓPOMÉJÌ

TWO DIMENSIONAL SHAPES	ÀWỌN ÈÈYÀ OLÓPOMÉJÌ
CIRCLE	ẸKÁ
PERIMETER	ODI
CIRCUMFERENCE	ODI-ẸKÁ
TRIANGLE	ÀÀDÓ
RECTANGLE	ONÍGUNMẸRIN (ỌTÚN)
SQUARE	ÀKÒDÌ
RHOMBOIDS	ÀKÒDÌ-TÍTẸ
ELLIPSE	ỌGBUN
PARALLELOGRAM	ẸLẸGBẸMẸRIN-GÍGÚN
TRAPEZIUM	ẸLẸGBẸMẸRIN ADÁGÚN

 **Ààdó** Triangle	 **Ààdó Ayakàtà** Isosceles triangle	 **Ààdó ọ̀tún** Right angle triangle	 **Ààdó ààrò** Equilateral triangle	 **Ààdó onígunfífẹ̀** Obtuse angle triangle
 **Onígunmẹ́rin àìgún** Irregular rectangle	 **Àkòdì** Square	 **Onígunmẹ́rin ọ̀tún** Rectangle	 **Àkòdì títẹ̀** Rhombus	 **Onígunmẹ́rin Adáp?gbà** Trapezium
 **Onígunmárun àìgún** Irregular pentagon	 **Onígunmárun gígún** Regular Pentagon		 **Onígunméfa àìgún** Irregular Hexagon	 **Onígunméfa gígún** Regular Hexagon


EKA (Circle)
ODI (Circumference)
IGBO (Radius)
AWE (Sector)
ÀLÀJÁ (Diameter)
OJÚ-EKÁ (Center of circle)
ÀSODÁ (Chord)
ÈBÙ (Segment)
OGBUN
ELLIPSE
ODI (Circumference)
ÀLÀJÁ KÉKERÉ (Minor diameter
ÀLÀJÁ NLÁ (Major diameter)
OJÚ OGBUN (Focus)

MODULE 30

AREA MEASUREMENT
ÈTÒ ÌGBÒRÒ WÍWỌN

AREA	**ÌGBÒRÒ**
AREA MEASUREMENT	**ÈTÒ ÌGBÒRÒ WÍWỌN**
ESTIMATION	**ÌFOJÚWỌN**
CALCULATION	**ÌṢIRÒ**
PARALLELOGRAM	**ẸLẸGBẸMẸRIN-GÍGÚN**
TRAPEZIUM	**ẸLẸGBẸMẸRIN ADÁGÚN**
2-DIMENSIONAL SHAPES	**ÈÈYÀ OLÓPOMÉJÌ**
AREAS OF 2-DIMENSIONAL SHAPES	**ÌGBÒRÒ ÀWỌN ÈÈYÀ OLÓPOMÉJÌ**

*ìgbòòrò /gba òrò/: to cover a lot of area; Itòòrò/tò sí òrò/: to settle at the bottom area

1	**Area of a rectangle**	**Ìgbòrò Onígunmẹrin-ọtún**	**Length x Breadth**	**Gígùn x Ibu**
2	**Area of a square**	**Ìgbòrò Àkòdì**	**Length x Length**	**Gígùn x Gígùn**
3	**Area of a parallelogram**	**Ìgbòrò Ẹlẹgbẹmẹrin**	**Base x height**	**Ìdí x Òòró**
4	**Area of a triangle**	**Ìgbòrò Ààdó**	**½ base x height**	**½ (Ìdì) x Òòró**
5	**Area of a circle**	**Ìgbòrò Ẹká**	**π x (radius)^2**	**π x (igbo) ^{2}**
6	**Area of a trapezium**	**Ìgbòrò Ẹlẹgbẹmẹrin Adágún**		

144 Sq. inches	144 ojú ìka ((Ìkan) ọrún, àt'ẹrin-dì l'ẹrin ojú ìka	1 ojú ẹsẹ
9 sq. feet	9 ojú ẹsẹ (ojú ẹsẹ mẹsan)	1 ojú ọpá
4840 sq. yards	4840 ojú ọpá (ẹrin ọkẹ, ẹjọ ọrún at'ẹrin-dì ojú ọpá)	1 ékà (1 acre)
640 acres	640 ékà (ẹfa ọrún, àt'ẹrin-dì ékà)	1 ojú máìlì kan

ÀLÀYÉ 1/ EXPLANATION 1:

		Length/Gígùn		Breadth/Ìbú		
	=	1 mítà (m)	x	1 mítà	=	1 m^2
1 square meter / 1 ojú mítà	=	0.5 mítà	x	2 mítà	=	1 m^2
	=	2 m	x	0.5 m	=	1 m^2
	=	4 m	x	0.25 m	=	1 m^2

			Length/ Gígùn		Breadth/ Ìbú		
		=	1 mítà	x	2 mítà	=	2 m^2
2 square meter /	2 ojú mítà	=	0.5 mítà	x	4 mítà	=	2 m^2
		=	2 m	x	1 m	=	2 m^2
		=	4 m	x	0.5 m	=	2 m^2

ÀṢEWÒ / EXERCISE

How many square meters is a table with:	Ojú mítà mélo ni tábìlì tó ní:

	Gígùn / Length	Ìbú/ Breadth	Ojú mítà / Square meters			Gígùn / Length	Ìbú/ Breadth	Ojú mítà / Square meters
1.	4 m	2 m	Oju mita 8 / 8 square meters / 8 m^2		2.	2 m	5 m	
3.	6 m	2 m			4.	5 m	3 m	
5.	1 m	9 m			6.	8 m	2 m	

ÀLÀYÉ 1/ EXPLANATION 1:

			Length/ Gígùn		Breadth/Ìbú				
		=	100 cm	x	100 cm	=	1 m^2	=	10000 cm^2
1 sq. meter/	ojú mítà 1	=	50 cm	x	200 cm	=	1 m^2	=	10000 cm^2
		=	200 cm	x	50 cm	=	1 m^2	=	10000 cm^2
		=	400 cm	x	25 cm	=	1 m^2	=	10000 cm^2

			Length/ Gígùn		Breadth/ Ìbú		
		=	100 cm	x	200 cm	=	20000 cm^2
2 square meters /	ojú mítà 2	=	50 cm	x	400 cm	=	20000 cm^2
		=	200 cm	x	100 cm	=	20000 cm^2
		=	400 cm	x	50 cm	=	20000 cm^2

ÀṢEWÒ / EXERCISE

How many square meters is a table with:	Ojú mítà mélo ni tábìli tó ní:

	Gígùn/ Length	Ìbú/ Breadth	Ojú mítà/ Square meters			Gígùn / Length	Ìbú / Breadth	Ojú mítà / Square meters
1.	400 cm	200 cm	400 cm = 0.4 m		2.	200 cm	500 cm	

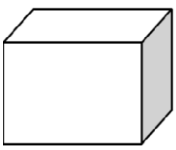
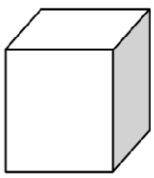
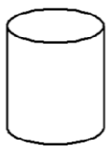
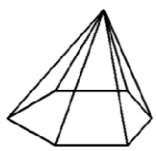
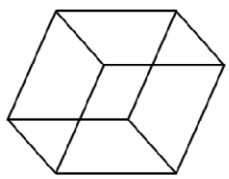
			200 cm = 0.2 m 0.4 m x 0.2 m = 0.08 m^2					
3.	600 cm	200 cm			4.	500 cm	300 cm	
5.	100 cm	900 cm			6.	800 cm	200 cm	

MODULE 31

3-DIMENSIONAL SHAPES
ÀWỌN ÈÈYÀ OLÓPOMẸTA

THREE DIMENSIONAL SHAPES	ÀWỌN ÈÈYÀ OLÓPOMẸTA
SPHERE	ÒṢÙṢÙ
CUBE	ÌGỌ̀N
CUBOID	ÌGỌ̀N-TÍTẸ
PYRAMID	PÍRÁMÍÌDÌ
MATHEMATICAL DIAGRAMS	ÀWỌN ÈÈYÀ ÌṢIRÒ

MATHEMATICAL DIAGRAMS	ÀWỌN ÈÈYÀ ÌṢIRÒ

 Àpótí (Rectangular Cylinder)	 Ìgon (Cube)	 Agolo (Cylinder)	 Òpó (Tube)	 Òkòtó (Cone)
 Pírámìdì Elègbémeta 3-sided Pyramid	 Piramìdì Elègbemerin 4 sided Pyramid	 Piramìdì Elègbemárun 5 sided Pyramid	 Piramìdì Elègbeméfà 6 sided Pyramid	 Ìgon Títè Cuboid

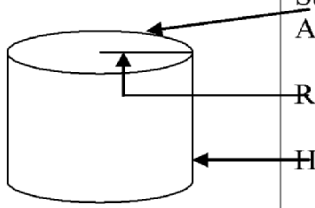
MODULE 32

VOLUME MEASUREMENT
ÌWỌN ÀYÈ

VOLUMES OF 3-DIMENSIONAL SHAPES	ÀYÈ ÀWỌN ÈÈYÀ OLÓPOMẸTA
VOLUME	ÀYÈ
3-D SHAPES	ÈÈYÀ OLÓPOMẸTA

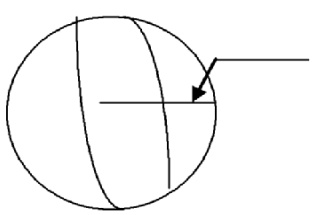
Volume of a Cylinder:
= Surface Area x Height
= π x r^3 x H

Àyè inú Agolo:
= Òrò ojú Agolo x Ìró
= π x $(igbo)^3$ x Ìró



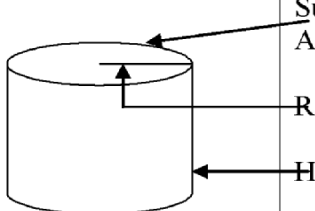
Volume of a Sphere:
4/3 x **π x (radius)^3**

Àyè inú òsùsu:
4/3 x **π x (igbo)^3**



Volume of a Cylinder:
= Surface Area x Height
= π x r^3 x H

Àyè inú Agolo:
= Òrò ojú Agolo x Ìró
= π x $(igbo)^3$ x Ìró



ÀPẸRẸ / EXAMPLE:

Find the volume of a cylinder of radius 3.5 cm and height 10 cm (π = 22/7)	**Wá àyè inú agolo kan tí igbo rẹ jẹ́ 3.5 cm., tí ìró rẹ sì jẹ́ 12 cm (π = 22/7)**

Radius of cylinder	$\frac{7}{2}$ cm	Igbo agolo
Area of base of cylinder	$= \pi r^2$ $= (\frac{22}{7} \times \frac{7}{2} \times \frac{7}{2})\ cm^2$	Òrò ìdí agolo
Height of cylinder	= 10 cm	Ìró agolo
.'. Volume of cylinder	$= (\frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times \frac{10}{1})\ cm^3$ $= 385\ cm^3$	.'. Àyè inú Agolo

MODULE 33

EQUATIONS
ÀWỌN ỌMÌ

EQUATIONS	**ÀWỌN ỌMÌ**
A + B = C + D	
ALGEBRA	**ÌṢIRÒ ALÁMÌN**

Compare an open sentence with a balance. To maintain the balance, we can 1. Add the same number to both sides 2. Subtract the same number from both sides 3. Multiply both sides by the same number 4. Divide both sides by the same non-zero number	Jẹ́kí a fi àwọn ÌṢIRÒ ọmì wé òṣùwọn Láti ríi pé ọnà méjèèjì dọgba, a lè: 1. ro iye kan náà pẹ̀lú ìhà méjèèejì 2. yọ iye kan náà kúrò nínú ìhà méjèèjì 3. fi iye kan náà sọ ìhà méjèèjì dipúpọ̀ 4. fi iye kan náà (tí kìí ṣe òdo) pín ìhà méjèèjì

ÀPẸRẸ / EXAMPLE:

Add 810 to both sides	a - 810 = 348 a – 810 + 810 = 348 + 810 a = 1158	Ro 810 pọ mọ ìhà méjèèjì

Add 9.3 to both sides	p - 9.3 = 6.8 p – 9.3 + 9.3 = 6.8 + 9.3 p = 16.1	Ro 9.3 pọ mọ ìhà méjèèjì

Add 4 1/2 to both sides	x - 4 1/2 = 2 1/4 x – 4 1/2 + 4 1/2 = 2 1/4 + 41/2 x = 6 ¾	Ro 4 1/2 pọ mọ ìhà méjèèjì

ÀṢEWÒ / EXERCISE:

Find the number each letter represents	Wá òòkà tí abídí kọọkan dúró fún

1. a - 37 = 93	
2. y - 2.3 = 5	
3. x - 5 5/8 = 1	
4. a + 47 = 76	
5. 7.6 - w = 4.43	

ÀPẸRẸ 2 / EXAMPLE 2:

Divide both sides by 3	$3c = 408$ $\frac{3c}{3} = \frac{408}{3}$ $c = 136$	Pín ìhà méjèèjì pẹ̀lú 3

Multiply both sides by 4	$d \div 4 = 23$ or $\frac{d}{4} = 23$ $\frac{d}{4} \times 4 = 23 \times 4$ $d = 92$	Sọ ìhà méjèèjì di púpọ̀ pẹ̀lú 4

Take 2 from both sides Divide both sides by 9	$9u + 2 = 38$ $9u + 2 - 2 = 38 - 2$ $9u = 36$ $\frac{9u}{9} = \frac{36}{9}$ $u = 4$	Yọ 2 kúrò nínú ìhà méjèèjì Pín ìhà méjèèjì pẹ̀lú 9

ÀṢEWÒ 2 / EXERCISE 2:

Find the number each letter represents	Wá òòkà tí abídí kọọkan dúró fún

1.	2a	+	3	=	13	
2.	6d	-	3	=	15	
3.	59	-	6u	=	5	
4.	746	-	8e	=	258	
5.	723	-	6k	=	195	

ÀṢEWÒ 2 / EXERCISE 2:

1	16 times a certain number is 112. Find the number..	16 lọnà iye òòkà kan jẹ́ 112. Wá iye òòkà yi.	
2	The product of two numbers is 1400. One of them is 40. What is the other number?	Ẹsún àwọn òòkà méjì jẹ́ 1400. Ìkan nínú àwọn òòkà yi jẹ́ 40. Kíni òòkà kejì?	
3	If I increase thrice a certain number by 8, the result is 47. What is the number?	Bí mo bá sọ òòkà kan dipúpọ̀ lọnà mẹta, tí mo sì ro 8 mọ ẹsún rẹ, èsì rẹ yóò jẹ́ 47. Kíni òòkà yi?	
4	The product of a number and 1.2 is 1.34. Find the number.	Ẹsún òòkà kan àti 1.2 jẹ́ 1.34. Wá òòkà yi.	

ADVANCED TOPICS

MODULE 34

STATISTICS
ÀWỌN ÒÒKÁDỊ̀RÍ

STATISTICS	ÒÒKÀDỊ̀RI (òòkà di ẹ̀ri: numbers become evidence)
PROBABILITY	ÌWỌN-ÌṢẸ́ẸṢE
MEAN(AVERAGE)	ÀRÒPÍN
MEDIAN	ÀÁRÍN
MEDIAN VALUE	IYE T'ÀÁRÍN
MODE	IYE ÀPỌJÙ
THE LAW OF AVERAGES	ÀWỌN ÒFI ÀRÒPÍN
RANGE	ÌGBỌN

Statistics is the study of sets of data and the ability to draw conclusions based on an examination of the data.	Ẹkọ òòkàdẹ̀rí jẹ́ ẹkọ àwọn agbo òòkà àti bí a ti nfa ẹ̀rí yọ lórí ìbẹ̀wò àwọn agbo òòkà yi
Average is another word for Mean	
Mean or the Arithmetic mean is the sum of a list of numbers, divided by the total number of numbers in the list.	**Àròpín jẹ́** irò àwọn ọwọ òòkà kan, tí a sì pín pẹ̀lú iye òòkà tó wà nínú ọwọ yi.
Median (median value) is the **'middle value'** of a list. The smallest number such that at least half the numbers in the list are no greater than it.	**Òòkà t'àárín jẹ́** òòkà tó wà láàrín àwọn ọwọ òòkà yi. Ìlàjì àwọn òòkà láàrín ọwọ òòkà yi kéré ju òòkà t'àárín. Ìlàjì wọn sì pọ ju ú.
Mode is the most common (frequent) value. A list can have more than one mode.	**Òòkà àpọjù** ni iye tó pọ jù tàbí yá jù.
Range is the difference between the largest and the smallest value in a list. Note that the range is a single number, not many numbers.	**Ìgbọn** jẹ́ ìyàtọ láàrín iye tó kéré jù ati tó tóbi jù láàrín ọwọ òòkà kan, Ẹ fi sí ìrántí pé ìgbọn jẹ́ ẹyọ òòkà kan, kìí ṣe ọpọ òòkà.

Median is the "middle value" of a list. The smallest number such that at least half the numbers in the list are no greater than it. If the list has an odd number of entries, the median is the middle entry in the list after sorting the list into increasing order. If the list has an even number of entries, the median is equal to the sum of the two middle (after

sorting) numbers divided by two. The median can be estimated from a histogram by finding the smallest number such that the area under the histogram to the left of that number is 50%. ********

Average speed is total distance / total time.

Average speed is total distance / total time (taken to travel the distance.)	**Àròpín eré jẹ́ ìròpọ̀** ìjìn / **ìròpọ̀** àkókò (tó gbà láti re ìjìn yi)

ÀPẸRẸ 1 / EXAMPLE 1

Question: A car travels between two cities 40 miles apart in 2 hours. What is its average speed	Ìbéèrè: Ọkọ-ayọkẹlẹ kan rin ìrìn-àjò láàrín ìlú méjì tó jẹ́ 40 máìlì sí ara wọn ní wákàtí 2. Kíni àròpín erée rẹ.
Answer: average speed = distance/time Therefore, the average speed of the car is 40 miles/2 hours = 20 miles/hour.	Èsì: Àròpín eré = ìjìn-àjò /àkókò. Nítorína, àròpín eré ọkọ yi jẹ́ 40 máìlì / 2 wákàtí = 20 máìlì / wákàtí (èjì-ìdì máìlì ní wákàtí kọọkan)

ÀPẸRẸ 2 / EXAMPLE 2

The set of scores for a class with 12 students:	Ọwọ́ àwọn máàkì fún kíláàsì tó ní ọmọléèwé 12 jẹ́:
87, 84, 92, 84, 72, 77, 59, 51, 84, 72, 99, 69	
Find the mean, median, mode, and range	Wá àròpín, iye t'àárín, iye-àpọjù, àti ìgbọn

Mean =	Àròpín wọn jẹ́:
(87+ 84 + 92 + 84 + 72 + 77 + 59 + 51 + 84 + 72 + 99 + 69)/12 = 930/12 = 77.5	
Median =	Iye t'àárín:
(77 + 84)/2= 161/2 =80.5	
Mode = 84 (The score 84 occurs more frequently than any other - three times)	Iye àpọjù = 84 (máàkì 84 ló hàn ju àwọn tó kù – ìgbà mẹta)
Range = highest test score - lowest test score = 99 - 51 = 48	Ìgbọn = máàkì tó ga jù – máàkì tó kéré jù = 99 - 51 = 48

MODULE 35

PROPORTIONS
ÀWỌN IYESÍYE

PROPORTIONS		**IYESÍYE (IYE SÍ IYE)**
PROPORTIONALITY CONSTANT		**ÒÒKÀ-ÀÌYE IYESÍYE**
	$\propto$	
DIRECT PROPORTIONS	**A $\propto$ B**	**IYE SÍ IYE**
INVERSE PROPORTIONS	**A $\propto$ 1/B**	**IYE SÍ ÌDÀ IYE**

A is directly proportional to B. If we know the constant of proportionality, **k** (constant of proportionality k) k we can turn this proportionality to an equation: **A = kB** If A is inversely proportional to B, for example **A $\propto$ 1/B** And the constant of proportionality is k1, the equation will be **A = k_1(1/B) = k_1/B**	Iye **A** dọwọ iye **B**. Bí a bá mọ òòkà àì-yẹ iyesiye, (**k** ni òòkà àì-yẹ iyesíye) a lè sọ iyesiye di ọmì: **A = kB** **k** ni òòkà àì-yẹ iyesíye ọmì yi Bí iye **A** bá dọwọ ìdà iye **B**, fún àpẹrẹ: **A $\propto$ 1/B** Ti òòkà àì-yẹ iyesíye si jẹ **k_1**, ọmì rẹ yóò di : **A = k_1(1/B) = k_1/B**

MODULE 36

FUNCTIONS
ÀWỌN ÌFÀ

FUNCTIONS		**ÀWỌN ÌFÀ**
	f	
	A = f (B)	
OPERATIONS		**ỌṢẸ ÌṢIRÒ**
MATHEMATICAL OPERATORS		**ÀWỌN ỌṢẸ ÌṢIRÒ**
FÚNCTION		**ÌFÀ**
SIMPLE FÚNCTIONS		**ÀWỌN ÌFÀ RÍRỌ**
DIRECT PROPORTIONS	**A∝B**	**IYE SÍ IYE**
INVERSE PROPORTIONS	**A∝1/B**	**IYE SÍ ÌDÀ IYE**

A is a fúnction of **B**:	A = f (B)	**A** jẹ́ ìfàa **B** (iye **B** ló fa iye **A**)

This means that before we can know the value of **A**, we must know the value of **B** For example: Let A= f (B) = $2B^2 + 3B - 4$: If B = 3, then A = $2 \times 3^2 + 3 \times 3 - 4 = 23$	Ó fi hàn wípé kí a tó mọ iye tí **A** jẹ́, a nílati mọ iye **B**. Fún àpẹrẹ: Jẹ́kí A= f (B) = $2B^2 + 3B-4$: Bí B = 3, A jẹ́ $2 \times 3^2 + 3 \times 3 - 4 = 23$ A jẹ́ èjì lọnà ẹta elédi méjì àti ẹta lọnà ẹta dín ẹrin = 23

MODULE 37

SUMMATION
ÌKÓPỌ

SUMMATION	**ÌKÓPỌ**
Σ	
a=b **Σa** **a=a**	
OPERATIONS	**ỌṢẸ ÌṢIRÒ**
MATHEMATICAL OPERATORS	**ÀWỌN ỌṢẸ ÌṢIRÒ**

The summation of **a** from **a** = **a** to **a** = **b**	$\sum_{a=a}^{a=b} a$	Àkópọ **a** láti ìgbà/ibi tí **a** ti jẹ́ **a** títí di ìgbà /ibi tí **a** fi jẹ́ **b** Àkópọ **a** láti **a** = 1 títídé **a** = b

ÀLÀYÉ /EXPLANATION

Question:	Ìbéèrè:
Solve: $B = \sum_{a=1}^{a=10} a$ (a = whole numbers)	Ṣàṣàrò (Ṣe àṣàrò): $B = \sum_{a=1}^{a=10} a$ (a = òòka odìdì)
Answer:	Ìdáhùn:
B =1+2+3+4+5+6+7+8+9+10 = 55	B =1+2+3+4+5+6+7+8+9+10 = 55 (B jẹ́ àròpọ 1 títídé 10 = 55)

MODULE 38

FACTORIALS
ÀWỌN ÌFẸSÚNLỌ́PO

FACTORIALS	**ÌFẸSÚNLỌPO**
X!	
X! = (X)(X-1)(X-2) ….	
MATHEMATICAL OPERATORS	**ÀWỌN AṢẸ-ÌṢIRÒ**
FACTORIALS	**ÌFẸSÚNLỌPO (Fi ẹsún lọpo – use product to multiply)**

To find the value of n! We use the integer n to multiply the integer that is 1 less than n (n-1) We then use the product of (n)(n-1) to multiply the value that is 1 less than n-1, n-2 to get (n)(n-1)(n-2) This is continued till we get to 1	Bi a bá fẹ wá ìfẹsúnlọ́po òòkà n = n! A óò fi èèka yi lọpo òòkà tó kéré ju òòkà n lọ ní ẹyọ kan (n-1). A óò sì fi ẹsún tí a ní (n)(n-1) lọpo òòkà tó kéré ju n-1 lọ l'ẹyọ kan (n-2) A óò si fi ẹsún ti a ní (n)(n-1)(n-2) lọpo òòkà to tún kéré ju (n-2) l'ẹyọ kan …..titi dé 1

ÀPẸRẸ 1/ EXAMPLE 1

Question: Find the value of 4!	Ìbéèrè: Wá ẹsún ìfẹsúnlọpo 4!
Answer: The value of 4! is 4x3x2x1 =24	Ìdáhùn: Ẹsún ìfẹsúnlọpo 4 jẹ́ 4x3x2x1 =24

ÀPẸRẸ 2 / EXAMPLE 2

If n is:/ Bí n bá jẹ́:	n!
0	1
1	1
2	2
3	6
4	24
5	120
6	720
7	5,040
8	40.320
9	362,880
10	3,628,800

MODULE 39

OTHER MEASUREMENTS

ÀWỌN ÌDÍWỌN MÍRÀN

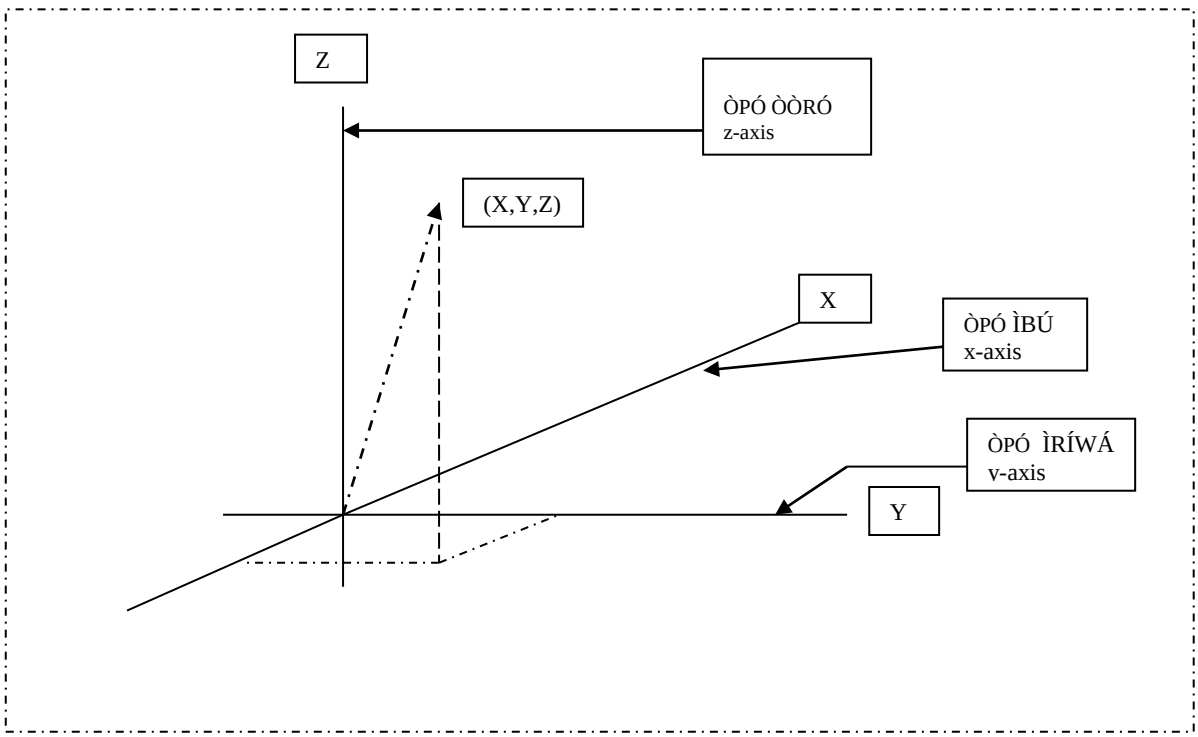
BASE SI UNITS	**ÀWỌN ÌPILẸ ÌDÍWỌN 'SI'**

	ÌWỌN	**ORUKỌ ÌDÌWỌN**	**ENGLISH Gẹẹsì**	**AMIN ÌDÌWỌN**
Time	Àkóko	Ìṣísẹ	Second	S
Distance	Ìjìnnà	Mítà	Meter	M
Mass	Okun	Ọkẹgrámu	Kilogram	Kg
Hotness	Ìgbóná	Kẹlfini	Kelvin	K
Brightness	Ìmọlẹ	Àbẹlà	Candle	CdA
Current	Ìsán-àrá	Ámpú	Amp	A
Amount of substance	Ọpọ	Móòlù	Mole	mol

MODULE 40

CARTESIAN COORDINATES
ÀMÌN-IPÒ DÈKÁT

CARTESIAN COORDINATES	ÀMÌN-IPÒ DÈKÁT
X-AXIS	ÒPÓ ÌBÚ
Y-AXIS	ÒPÓ ÌRÍWÁ
Z-AXIS	ÒPÓ ÒÒRÓ



MODULE 41

DICTIONARY

ENGLISH - YORUBA

2-Dimensional Shapes	**Èèyà Olópoméjì**
3-Dimensional Shapes	**Èèyà Olópometa**
Abbreviate	**Láti gé (ọrọ) kúrú**
Acceleration	**Ìdà-eré; ìperédàsíwájú (deceleration: ìperédàsẹhìn)**
Acute Angle	**Ígun mímú**
Acute angle triangle	**Ààdó Onígunmímú**
Add	**Láti ṣàròpọ**
Addend	**Èrò**
Addition	**Ìròpọ, Àròpọ**
agent	**alábaṣe, alágbàtà**
Algebra	**Ìṣirò Àlámìn**
Amount of substance	**Ọpọ**
Angle	**Igun (Acute angle: igun mímú ; Obtuse angle: igun fífẹ ; right angle: igun-ọtún)**
Answers	**Ìdáhun, èsì, ìfèsì**
Approximation	**Ìpẹra**
Approximation symbol	**Àmìn Ìpẹra**
Arabic number	**Òòkà Lárúbáwá**
Area	**Ìgbòrò**
Average	**Àròpín (rò + pín: add and then divide; average speed: àròpín eré)**
Balance	**Òṣùwọn**
Ball	**Bọọlù, ìṣù**
Base area	**Òrò**
Basic Operations	**Ọṣẹ …**
Bilaterally symmetrical object	**Ẹdá Agúnrégé**
Billion	**Èèrú**
Billionth	**Ìdá-èèrú**
Branch	**Ẹka**
Breadth	**(Ìwọn) Ìbú**
Calculate	**Ṣèṣirò**
Calculation	**Ìṣirò**

Calendar	**Ìwé imọn-gbá**
Capacity	**Ojúwọn**
Cartesian coordinates	**Àmìn-ipò Dèkát**
Cause	**Ìdì, Òkùnfà, Ìpilẹ**
Cause and effect	**Ìpilẹ àt'àbáyọrí**
Center of circle	**Ojú-ẹ́ká**
Century	**Ọrún-dún**
Characteristics	**Àmì-Ìdáyàtọ**
Circle	**Ẹ́ká (center of circle: ojú ẹ́ká); radius of a circle: igbo ẹ́ká**
Circumference	**Odi-ẹ́ká**
Classification	**Ìkàsí, Kíkàsí**
Commission	**Làádà**
Common Factor	**Ìfipín Àjọní**
Compound interest	**Èlé-èlé**
Constant	**Àì-yẹ**
Copy	**Ṣàdàkọ**
Cost	**Ìná**
Counting	**Kíkà, Ìkà**
Cube	**Ìgọn (Edge of a cube: igun-ìgọn; Corner of a cube: koro-ìgọn; Face of a cube: iwájú-ìgọn)**
Cubic	**Oniwọnmẹ́ta (cubic equation: ọmì onirinmẹ́ta; cubic measure: iwọn-àyè)**
Cuboid	**Ìgọn Títẹ**
Cuboid	**Aríbí-ìgọn**
Curvature	**Ìwọ-ẹ́ká**
Curves	**Ìlà wíwọ, ìwọ**
Cylinder	**Agolo**
Day	**Ọjọ**
Decimal	**Ẹ́sẹ (decimal system; ètò àwọn ẹ́sẹ)**
Decimal Fraction	**Ìdásíwẹ́wẹ́ Ẹ́lẹ́sẹ**
decimal point:	**Ẹ́sẹ**
Degree	**Àléfà**
Denominator	**Ìfipín**
Diagram	**Àwòjúwe**
Diameter	**Àlàjá (ẹ́ká)**
Difference	**Ìyàtọ**
Digit	**Ẹ́yọ-ònkà**
Direct Proportions	**Iye sí iye**
Discount	**Ẹ́dínwó**
Distance	**Ìjìnnà**
Dividend	**Èpín**

Division	**Pínpín**
Divisor	**Ìfipín**
Dot	**Àmì ìdúró**
Draw an illustration	**Ṣàyàjúwe**
Education	**Ètò-ẹkọ**
Educators	**Olùkọni**
Eighty	**Ẹjọ-dì, Ẹjọ ìdì**
Ellipse	**Ọgbun**
Equal to	**Jẹyekan pẹ̀lú**
Equality	**Ìjẹyekan**
Equation	**Ọmì**
Equivalent	**Dọgba pẹ̀lú**
Equivalent fractions	**Ìdásíwẹ́wẹ́ Ọgbọgba**
Estimate	**Fojúwọn (fi ojú wọn); Fi ojú-inú wọn**
Estimation	**Ìfojúwọn**
Even number	**Òòkà oní-ìlàjì**
Example	**Àpẹrẹ; (for example: fún àpẹrẹ)**
Exercise	**Àṣewò**
Explain	**Ṣàlàyé**
Exponents	**Àwọn Edi-Òòkà**
Factor	**Ìfipín**
Factorials	**Ìfẹsúnlọpo**
Family Tree	**Igi ìdílé**
Fifty	**Àrún-dì, Àrún ìdì**
Figure	**Èèyà**
Find the average of	**Ṣàròpín**
Focus	**Ojú-ọgbun**
Formula	**Ìlànà-ìṣe**
Forty	**Ẹrin-dì, Ẹrin ìdì**
Fractions	**Ìdàsíwẹ̀wẹ̀**
Function	**Ìlò**
Function (mathematics)	**Ìfà**
Furlong	**Òréré**
Give an example	**Ṣàpẹrẹ**
Give an illustration	**Ṣàkọjúwe**
Graphs	**Ìlà-Ìfà**
Group	**Agbo, ẹyà, orísi, ọwọ**
Height	**(Ìwọn) Ìga, gíga, ìnọnró, òòró**
Hexagon	**Oníhàmẹ̀fà**
Highest common factor	**Ìfipín nlá àjọní**
Horizontal	**Ìbú**

hour	**Wákàtí**
Hundred	**Ọrún**
Identification	**Ìtọka**
Identify	**Tọka, ṣetọka**
Improper ractions	**Ìdásiwẹ̀wẹ̀ àìtọ**
Inch	**Ìka**
Inclined planes	**Pẹ̀pẹ̀ dídà**
Instrument	**Irin-iṣẹ́, ẹrọ**
Interest	**Èlé (Simple interest: èlé; Compound Interest: èlèlé; èlè lórí èlè)**
Inverse proportions	**Iye sí ìdà iye (direct proportion: iyesíye)**
Isosceles Triangle	**Ààdó Ayakàtà**
Least Common Denominator	**Ìfipín kékeré àjọ́ní**
Least common multiple	**Ìlọpo kékeré àjọ́ní**
Length	**Gígùn , Ìgùn, ìró, òòró**
Length Measurement	**Ètò Ìwọn Gígùn**
Lines	**Ìlà, ọnà**
Mass	**Okun, Ìwọn-okun**
Mathematical Operators	**Àwọn Àṣẹ-Ìṣirò**
Mathematical Symbols	**Àwọn àmìn fún Ìṣirò**
Mathematics	**Ìṣirò**
Mean / Average	**Àròpín**
Measurement	**Ìwọn (~ of mass: ìwọn okun; ~ of volume: ìwọn àyè)**
Median	**Iye t'àárín**
Median Value	**Iye t'àárín**
Method	**Ìlànà**
Methodology	**Ètò ìlànà**
Mile	**Máìlì**
Million	**Òdù**
Million Billion	**Òdù-èèrú 10^{15}**
Billion Billion	**Eeru-èèrú 10^{18}**
Minuend	**Ìní**
Minutes	**Ìṣẹ́jú (Second: ìṣisẹ; Hour: wakati)**
Mixed numbers	**Àwọn òòkà àdàpọ**
Mode	**Iye Àpọjù**
Money	**Owó**
Month	**Oṣù**
Multiple	**Ìlọpo (Least common ~: Ìlọpo kékeré Àjọ́ní)**
Multiplicand	**Ìlọpo**
Multiplication	**Ìsodipúpọ; Ìsọdọpọ**
Multiplier	**Ìfilọpo**
Multiply	**Ṣèsọdipúpọ̀, sọ di púpọ**

MulTyiplicand	**Ìní**
Ninety	**Ẹsán-dì, Ẹsán ìdì**
Numbers	**Àwọn Òòkà**
Numerals	**Àwọn Ònkà**
Numerator	**Èpín**
Object	**Ohun; Ohun-ríirí**
Objective	**Èrò**
Observation	**Àkíyèsí**
Obtuse Angle	**Igun Fífẹ**
Obtuse Angle Triange	**Ààdó Onígun Fífẹ**
Odd number	**Òòkà àìnídajì, Òòkà àìnílàjì**
One hundredth	**Ìdá-ọrún**
One tenth	**Ìdá-ìdì**
One thousandth	**Ìdá-ọkẹ**
Operations	**Ọṣẹ (Mathematical operation: Ọṣe ìṣirò)**
Parallel lines	**Àwọn ìlà-ọgbà**
Parallelogram	**Oníhàmẹrin Gígún**
Parts	**Abala; ẹyà**
Pentagon	**Oníhàmárun**
Percent	**Ìdá-ọrún**
Percent commission	**Iye ìdá-ọrún làádà**
Percent profit	**Èrè lórí Ìdá-ọrún**
Percentages	**Ìdá-àpò; Ìdá-ọrún**
Perimeter	**Odi**
Perimeter	**Ìwọn-àyíká; Àyíká èèyà**
Perpendicular line	**Ìlà ògìdo**
Place Value	**Iye nípa ipò**
Plane	**Pẹpẹ**
Plane figures	**Èèyà orí pẹpẹ**
Plane Polar Coordinate	**Àmin-Ipò orí-pẹpẹ**
Primary	**Àkọkọ; alákọbẹrẹ**
Prime Nimbers	**Àwọn òòkà àìní-ìfipín, Òòkà àìnífipín**
Principal (money)	**Ẹyá-owó**
Probability	**Ìwọn Iṣe-éṣe**
Problem	**Ìyọnu**
Product (material)	**Ọjà**
Profit	**Èrè**
Profit and Loss	**Èrè àt'àdánù**
Proper fractions	**Ìdásíwẹ́wẹ́ títọ**
Proportionality Constant	**Òòkà-àìyẹ Iyesíye**
Proportions	**Iyesíye (iye sí iye)**

Purchase	**Rírà**
Pyramid	**Pírámìdì**
Pythagoras Rule	**Òfi Pìtágórà**
Question	**Ìbéèrè**
Quotient	**Ìpín**
Radial Symmetry	**Ìgúnláyiká**
Radius	**Igbo**
Range	**Ìgbọn**
Rate	**Ìwọ n-iye**
Ratio	**Ìbùpín**
Rectangle	**Onígunmẹrin ọtún, oníhàmẹrin gígún**
Rectangular Cylinder	**Àpótí**
Remainder	**Ìṣẹkù; Ìyókù**
Rewrite	**Ṣàtúnkọ**
Rhomboid/ Rhombus	**Àkòdì-títẹ**
Right Angle	**Igun ọtún**
Right Angle Triangle	**Ààdó Onígun-ọtún**
Roman number	**Òòkà Rómánù**
Roots	**Irìn**
Salary	**Owó-iṣẹ**
Sale	**Títà**
Samples	**Irú, Irú-ẹyà, Ìjúwe, Àpèjúwe**
Say an example	**Ṣàpèjúwe**
Second	**Ìṣísẹ**
Sector	**Awẹ**
Selling Price	**Iye ìtà**
Seventy	**Èje-dì, Èje ìdì**
Shape	**Ìrí, Ìrísí**
Similarity	**Ìbárajọ**
Simple Interest	**Èlé**
Simplify	**Ṣọdiríọ**
Sixty	**Ẹfà-dì, Ẹfà ìdì**
Solve (a problem)	**Ṣe ojútùú, (Ṣojútùú) (ìyọnu)**
Speed	**Eré-tààrà**
Sphere	**Òṣùṣù**
Square	**Àkòdì**
Square Numbers	**Àwọn Òòkà Onírìnmeji**
Square root	**Irìn kejì**
Statistics	**Ẹkọ òòkàdẹri (òòkà di ẹrí: numbers become evidence)**
Subtract	**Ṣàyọkúrò**
Subtracthend	**Àyọkúrò**

Subtraction	**Ìyọkúrò, Àyọkúrò**
Sum	**Àròpọ**
Summary	**Àkótàn**
Summation	**Ìkópọ**
Symbols	**Àmìn**
Symmetry	**Ìgúnrégé**
Taxes	**Owó-orí**
Technique	**Ìlànà-ìṣe**
Temperature	**Ìgbónà**
Ten	**Ìdì-kan, ìkan-dì**
The Law of Averages	**Àwọn Òfin Àròpín**
Thermometer	**Awọngbóná (wọn ìgbóná: measure hotness)**
Thirty	**Ẹta-dì, Ẹta ìdì**
Thousand	**Ọkẹ**
Three dimensional shapes	**Àwọn èèyà olópomẹta**
Time	**Àkókò**
Time Meaurement	**Ètò Àkókò wiwọn**
Topic	**Àṣàrò**
Trapezium	**Oníhàmẹrin Adápọgbà**
Triangles	**Ààdó**
Trillion (Thousand billion)	**Ọkẹ-èèrú, 10^{12}**
Twenty	**Èjì-dì, Èji ìdì**
Two Dimensional Shapes	**Àwọn èèyà Olópoméjì**
Unit	**Ẹyọ**
Unit Ratio	**Ìdíwọn Ìbùpín**
Value	**Iye, oye**
Velocity	**Ìyásí Ìpapòdà; Ìdà-ipò**
Volume	**Àyè**
Weight	**Ìwúwo; Ìwọn-ìwúwo; ọrìn**
Whole numbers	**Òòkà Odindi**
Width	**(Ìwọn) Ìbú**
Workshop	**Iléeṣẹ, Ilé Iṣẹ**
Write down	**Ṣàkọsílẹ**
X-axis	**Òpó Ìbú**
Yard	**Ọpá**
Y-axis	**Òpó Ìríwá**
Year	**Ọdún**
Z-axis	**Opó Òòró**

MODULE 42

DICTIONARY

YORUBA - ENGLISH

(Ìwọn) Ìbú	Width
Ààdó	Triangles
Ààdó Ayakàtà	Isosceles Triangle
Ààdó Onígun Fífẹ	Obtuse Angle Triange
Ààdó Onígunmímú	Acute angle Triangle
Ààdó Onígun-Ọtún	Right Angle Triangle
Abala; ẹyà	Parts
Agbo, ẹyà, orísi, ọwọ	Group
Agolo	Cylinder
Àì-yẹ	Constant
Àkíyèsí	Observation
Àkòdì	Square
Àkòdì-títẹ	Rhomboid/ Rhombus
Àkókò	Time
Àkọkọ	Primary, Initial
Àkótàn	Summary
Alábaṣe, alágbàtà	agent
Àlàjá (ẹká)	Diameter
Alákọbẹrẹ	Primary, Beginner
Àléfà	Degree
Àmì ìdúró	Dot, full stop
Àmì-Ìdáyatọ	Characteristics
Àmìn	Symbols
Àmìn Ìpẹ́ra	Approximation symbol
Àmìn-ipò Dekat	Cartesian coordinates
Àmin-Ipò orí-pẹpẹ	Plane Polar Coordinate
Àpèjúwe	Sample, Example
Àpẹrẹ;	Example ((for example: fún àpẹrẹ)
Àpótí	Rectangular Cylinder
Aríbí-ìgọn	Cuboid
Àropin	Average ((rò + pín: add and then divide)
Àròpín	Mean, Average

Àròpín eré	Average speed
Àròpọ	Sum
Àrún-dì, Àrún ìdì	Fifty
Àṣàrò	Topic
Àṣewò	Exercise
Awẹ	Sector
Àwòjúwe	Diagram
àmìn fún Ìṣirò	Mathematical Symbols
Edi-Òòkà (Àwọn ~)	Exponents
Ònkà (Àwọn ~)	Numerals
Òòkà (Àwọn ~)	Numbers
òòkà àdàpọ (Àwọn ~)	Mixed Numbers
Òòkà Onírìnmeji	Square Numbers
Ọṣẹ Ìṣirò	Mathematical Operator
Awọngbóná	Thermometer (wọn ìgbóná: measure hotness)
Àyè	Volume
Àyíká èèyà	Perimeter
Àyọkúrò	Subtracthend
Bọọlù, ìṣù	Ball
Dọgba (pẹ̀lú)	Equivalent to
Ẹdá Agúnrégé	Bilaterally symmetrical object
Ẹdínwó	Discount
Èèrú	Billion
Èèyà	Figure
Èèyà Olópoméjì	2-Dimensional Shapes
Èèyà Olópoméjì ((Àwọn ~)	Two Dimensional Shapes
Èèyà Olópometa	3-Dimensional Shapes
Èèyà olópomẹta (Àwọn ~)	Three dimensional shapes
Èèyà orí pẹpẹ	Plane figures
Ẹfà-dì, Ẹfà ìdì	Sixty
Èje-dì, Èje ìdì	Seventy
Èjì-dì, Èji ìdì	Twenty
Ẹjọ-dì, Ẹjọ ìdì	Eighty
Ẹka	Branch
Ẹká	Circle (ojú ~: center of circle)
Ẹkọ òòkàdẹri	Statistics (òòkà di ẹrí: numbers become evidence)
Èlé	(Simple) Interest (Compound interest: èlèlé)
Èlé	Simple Interest
Èlé-èlé	Compound interest
Èpín	Dividend
Èpín	Numerator

Èrè	Profit
Èrè àt'àdánù	Profit and Loss
Èrè lórí Ìdá-ọrún	Percent profit
Èrèèrú	Billion Billion, 10^{18}
Eré-tààrà	Speed
Ẹrin-dì, Ẹrin ìdì	Forty
Èrò	Addend
Èrò	Objective
Ẹsán-dì, Ẹsán ìdì	Ninety
Ẹsẹ	Decimal (decimal system; ètò àwọn ẹsẹ)
Ẹsẹ	Decimal point
Ẹta-dì, Ẹta ìdì	Thirty
Ètò Àkókò wiwọn	Time Meaurement
Ètò ìlànà	Methodology
Ètò Ìwọn Gígùn	Length Measurement
Ètò-ẹkọ	Education
Ẹyá-owó	Principal (money)
Ẹyọ	Unit
Ẹyọ-ònkà	Digit
Fojú-inú wọn	Estimate
Fojúwọn (fi ojú wọn)	Estimate
Gíga (Ìwọn Gíga)	Height
Gígùn	Length
Ìbárajọ	Similarity
Ìbéèrè	Question
Ìbú	Horizontal
Ìbú (Ìwọn Ìbú)	Breadth
Ìbùpín	Ratio
Ìdá-èèrú	Billionth
Ìdà-eré; ìperédàsíwájú	Acceleration (deceleration: ìperédàsẹ̀hìn)
Ìdáhun, èsì, ìfèsì	Answers
Ìdá-ìdì	One tenth
Ìdá-ọkẹ	One thousandth
Ìdá-ọrún	One hundredth
Ìdá-ọrún	Percent, Percentages
Ìdàsíwẹ̀wẹ̀	Fractions
Ìdásiwẹ̀wẹ̀ àìtọ	Improper Fractions
Ìdásíwẹ́wẹ́ Ẹlẹsẹ	Decimal Fraction
Ìdásíwẹ́wẹ́ ọgbọgba	Equivalent fractions
Ìdásíwẹ́wẹ́ títọ	Proper fractions
Ìdí (Òkùnfà, Ìpilẹ)	Cause

Ìdì-kan (Ìkan-dì)	Ten
Ìdíwọn Ìbùpín	Unit Ratio
Ìfà	Function (mathematics)
Ìfẹ́súnlọ́po	Factorials
Ìfilọ́po	Multiplier
Ìfipín	Denominator
Ìfipín	Divisor
Ìfipín	Factor
Ìfipín Àjọní	Common Factor
Ìfipín kékeré àjọní	Least Common Denominator
Ìfipín nlá àjọní	Highest common factor
Ìfojúwọn	Estimation
Ìga, (Ìwọn Ìga)	Height
Igbo	Radius
Igbo ẹ́ká	Radius of a circle
Ìgbọn	Range
Ìgbónà	Temperature
Igi ìdílé	Family Tree
Ìgọn	Cube
Ìgọn Títẹ́	Cuboid
Igun	Angle
Igun fífẹ́	Obtuse angle
Igun Fífẹ́	Obtuse Angle
Ígun mímú	Acute Angle
Igun ọ́tún	Right Angle
Igun-ìgọn	Edge of a cube
Ìgúnláyiká	Radial Symmetry
Igun-ọ́tún	Right angle
Ìgúnrégé	Symmetry
Ìjẹ́yekan	Equality
Ìjìnnà	Distance
Ìjúwe	Sample, Example
Ìka	Inch
Ìkàsí, Kíkàsí	Classification
Ìkópọ́	Summation
Ìlà ògìdo	Perpendicular line
Ìlà wíwọ́, ìwọ́	Curves
Ìlà, ọ́nà	Lines
Ìlà-Ìfà	Graphs
Ìlànà	Method
Ìlànà-ìṣe	Formula

Ìlànà-ìṣe	Technique
Ìlà-Ọgbà (Àwọn ~)	Parallel lines
Iléeṣẹ, Ilé Iṣẹ	Workshop
Ìlò	Function
Ìlọpo	Multiple (~ kékeré Àjọní: Least Common Multiple)
Ìlọpo	Multiplicand
Ìlọpo kékeré àjọní	Least common multiple
Ìná	Cost
Ìní	Minuend
Ìní	MulTyiplicand
Ìnọnró	Height
Ìpẹ̀ra	Approximation
Ìpilẹ àt'abáyọrí	Cause and effect
Ìpín	Quotient
Ìrí, Ìrísí	Shape
Irìn	Roots
Irìn kejì	Square root
Irin-iṣẹ, ẹrọ	Instrument
Ìròpọ, Àròpọ	Addition
Irú	Sample, Example
Irú-ẹyà	Sample, Example
Ìṣẹjú	Minute (Second: ìṣisẹ; Hour: wakati)
Ìṣẹkù	Remainder
Ìṣirò	Calculation
Ìṣirò	Mathematics
Ìṣirò Àlámìn	Algebra
Ìṣísẹ	Second (Ìṣẹjú: minute; Wákàtí: Hour)
Ìsodipúpọ; Ìsọdọpọ	Multiplication
Ìtọka	Identification
Ìwé imọn-gbá	Calendar
Ìwọ n-iye	Rate
Ìwọ-ẹ́ká	Curvature
Ìwọn	Measurement (~ okun: measurement of mass)
Ìwọn Iṣe-éṣe	Probability
Ìwọn-ìwúwo	Weight (Mass: Okun)
Ìwúwo	Weight (Mass: Okun)
Ìyásí Ìpapòdà; Ìdà-ipò	Velocity
Ìyàtọ	Difference
Iye Àpọjù (statistics)	Mode
Iye Ìdá-ọrún làádà	Percent commission
Iye ìtà	Selling Price

Iye nípa Ipò	Place Value
Iye sí ìdà iye	Inverse proportions (Direct proportion: iyesíye)
Iye sí iye	Direct Proportions
Iye t'àárín	Median, Median Value
Iye, oye	Value
Iyesíye (iye sí iye)	Proportions
Ìyókù	Remainder
Ìyọkúrò, Àyọkúrò	Subtraction
Jẹyekan pèlú	Equal to
Kíkà, Ìkà	Counting
Kọrọ-ìgọn	Corner of a cube
Làádà	Commission
Láti gé (ọrọ) kúrú	Abbreviate
Láti Ṣàròpọ	Add
Máìlì	Mile
Odi	Perimeter
Odi-ẹká	Circumference
Òdù	Million
Òdù- èèrú	Million trillion
Ọdún	Year
Òfi Àròpín (Àwọn ~)	The Law of Averages
Òfi Pìtágórà	Pythagoras Rule
Ọgbun	Ellipse
Ohun; Ohun-ríirí	Object
Ọjà	Product (material)
Ọjọ	Day
Ojú-ẹká	Center of circle
Ojú-ọgbun	Focus
Ojúwọn	Capacity
Ọkẹ	Thousand
Ọkẹ-èèrú	Trillion
Okun (Ìwọn-okun)	Mass
Olùkọni	Educators
ọmì	Equation
Onígunmẹrin ọtún,	Rectangle
Oníhàmárun	Pentagon
Oníhàmẹfà	Hexagon
Oníhàmẹrin Adápọgbà	Trapezium
Oníhàmẹrin Gígún	Parallelogram
Oníhàmẹrin gígún	Rectangle
Oniwọnmẹta	Cubic (Ìwọn-àyè: Cubic measure)

Òòkà àìnídajì	Odd number
Òòkà àìnífipín (Àwọn ~)	Prime Nimbers
Òòkà àìnílàjì	Odd number
Òòkà Lárúbáwá	Arabic number
Òòkà Odindi	Whole numbers
Òòkà oní-ìlàjì	Even number
Òòkà Rómánù	Roman number
Òòkà-àìyẹ Iyesíye	Proportionality Constant
Òòró	Height
Ọpá	Yard
Ọpọ	Amount of substance
Òpó Ìbú	X-axis
Òpó Ìríwá	Y-axis
Opó Òòró	Z-axis
Òréré	Furlong
Ọrìn	Weight (Mass: Okun)
Òrò	Area
Òrò	Base area
Ọrún	Hundred
Ọrún-dún	Century
Ọṣẹ	Basic Operations
Ọṣẹ	Operator, Operation (~ ìṣirò: Mathematical Operator)
Ọṣù	Month
Òṣùṣù	Sphere
Òṣùwọn	Balance
Owó	Money
Owó-iṣẹ	Salary
Owó-orí	Tax
Pẹpẹ	Plane
Pẹpẹ dídà	Inclined planes
Pínpín	Division
Pírámìdì	Pyramid
Rírà	Purchase
Ṣàdàkọ	Copy
Ṣàkọjúwe	Give an illustration
Ṣàkọsílẹ	Write down
Ṣàlàyé	Explain
Ṣàpèjúwe	Say an example, Cite an example
Ṣàpẹrẹ	Give an example
Ṣàròpín (Ṣe + rò + pín)	Find the average of
Ṣàtúnkọ	Rewrite

Ṣàyàjúwe	Draw an illustration
Ṣàyọkúrò	Subtract
Ṣèṣirò	Calculate
Ṣesọdipúpọ	Multiply
Sọdiríọ	Simplify
Ṣojútùú (ìyọnu)	Solve (a problem)
Títà	Sale
Tọka, ṣetọka	Identify
Wákàtí	hour