KABOJJA JUNIOR SCHOOL

P.3 MATHEMATICS LESSON NOTES AND TOPICAL QUESTIONS

TERM I

SET CONCEPTS

What is a set?

- A set is a collection of well-defined objects.
- Things found in a set are called members or elements.

Example of sets.

a) A set of the first five letters of alphabet.

b). A set of 2 trees.

Exercise 1a;

Draw and name the following sets;

1. A set of 4 girls. 2) A set of 5 chairs. 3) A set of 3 stars. 4) A set of 2 huts.

TYPES OF SETS.

1. Equal sets 2). Non-equal sets 3). Equivalent sets 4) Non – equivalent sets
5). Empty sets 6). Intersecting sets 7). Union set.

EQUAL or IDENTICAL SETS (" =")

- Equal sets are sets which have exactly the same type of members.

Example;

1. Set A = { c , u , t } and B = { t , u , c }
   Set A is equal to set B.
   A = B

NON- EQUAL SETS (≠)

- Non –equal sets which have different number of members of different kind.

Example;

Set B={e, t, o} and set D= {b, y}
Set B is not equal to D.
B ≠ D

Exercise 1b;

Write equal or not equal.

1. Set P={1, 2, 3, 4, 5} and set Q ={3, 5, 2, 1, 4}. Set P is _____to set Q.
2. D={a, i,o,u} and set E={e, f, g}. Set D is _____ to set E.
3. Set S= k l m and set T = M n l Set S is ___ to set T

4. R={ ○ ▭ , △ } and set O ={ ▭, ◇ }Set R is _____ to set O.

MATCHING OR EQUIVALENT SETS " ↔

- Equivalent sets are sets with the same number of members but may be of different kind.
- All equal sets are equivalent but not all equivalent sets are equal sets.

EXAMPLE

P = { a , e , i , o , u } and Q = { 1 , 2, 3, 4, 5 }.
Set P has 5 elements and set Q has 5 elements.
Set P is equivalent to set Q.
P ↔ Q

NON- EQUIVALENT SETS

- Non – equivalent sets do not have the same number of members.

S = { c , o , w } and T = { w , s }
Set S has 3 members and set T has 2 members.
S is not equivalent to set T
S ↮ T

Exercise 1c;
Write Equivalent or not equivalent.

1. Set E={ a, b, c, d, } and set F ={2, 4, 6, 8}. Set E has __elements. Set F has __ members. Set E is _____ to set F.
2. Set M ={p, q, r, s,t} and set N ={u, v, w, x} .Set M has ___members. Set N has __ members. Set M is _____ to set N.
3. A= k l m n o and set B= P m n Set A has __elements.Set B has _elements. Set A is ___ to set B.

EMPTY or NULL SET " ∅ Or, { }"

- An empty set is a set without members.
- Another name for empty set is a null set.

Examples

a) Set K = {Pupils in p 3 with 10 legs}
Set K = ∅ or { }.

b) Set R = {Our teachers with less than 3 years of age}
R = ∅ or { }.

NUMBER OF ELEMENTS IN A GIVEN SET e.g n(P).

Examples ;

1. If K={a,b,c,d}.Find n(K)

K={a,b,c,d}

n(K)=4

2. Given that set R = P m n

How many members are in set R ?

R={ p, m, n,}

There are 3 elements in set R. or n(R)=3

Exercise 1e;

1. If set P={1, 2, 3, 4, 5, 6, 7}.Find n(P)
2. Given that D={ a, e, I ,o, u}. How many elements are in set D?
3. Set Y={h, m, j, h, r, i}.Find n(Y).
4. If set W={e, f, g, h}. What is n(W)?
5.

INTERSECTING SETS " ∩"

- Intersecting sets are sets with common members or elements.

Example:-

1. Set F = { e , a , r , } and set G = { l , e , a , n }

F={e a r}

G={l, e a n}

Common members ={e , a }

- So set F and set G is intersection sets.

F ∩ G= {e, a}

- Common members are written only once.

Example 2.

Set A = { d , i , g }and set B = { d , o n , e }

A={g, i, d}

B={d o, n, e}

A ∩ B = { d }

Exercise 1f;

1. If set A={1, 2, 3, 4, ,5} and set B={2, 4, 6, 8}. Find A∩B.
2. Given that P={a, e, I, o, u} and Q={a, b, c, d}.What is P∩Q ?
3. Set W={ o, p q, r, s} and set R={m, n, o, p}.List down all the elements of set W∩R.

4. M={b, o, y, s} and N={c, a, m, b, s}List down all the elements of set M∩N.

Finding the number of elements in intersection sets.

Example 1

M = { a , b , c , d , e } and N = { a , e , i , o ,u }. Find n (M ∩ N)

M={a, b, c, d, e}

N={a, e, i, o, u }

M ∩ N = {a, e}

n (M ∩ N)=2

Example 2

Set A = { d , i , g }and set B = { d , o n , e }.How many members are in set A∩B

A={g, i, d}

B={d, o, n, e}

A ∩ B = { d }

There is one member in set A∩B.

OR n(A∩B)= 1.

Exercise 1g;

1. If set A={1, 2, 3, 4, ,5} and set B={2, 4, 6, 8}. Find n(A∩B).
2. Given that P={a, e, I, o, u} and Q={a, b, c, d}.What is n(P∩Q) ?
3. Set W={ o, p q, r, s} and set R={m, n, o, p}.How many elements are in W∩R?.
4. M={b, o, y, s} and N={c, a, m, b, s}How many elements are in M∩N?.
5.

UNION SET " ∪"

A Union set is a set with two or more sets put together.

- In a union set a member is written once.

Example;1

Given that W = {1, 2,3} and set Z = { x, y, z }. Find W∪Z

Set W Union set Z = { 1,2,3,x,y,z }

W ∪ Z ={ 1,2,3,x,y,z }

Example;2

Set F={c,a,r,e,s} and G={c,o,n,e,s}. List down all the elements of set F∪G

F={c, a, r, e, s }

G={c, o, n, e, s }

F∪G={c ,e ,a, r ,s ,o ,n}

Exercise 1 h

1. If set D={1, 2, 3, 4, ,5} and set C={2, 4, 6, 8}. Find (D∪C).
2. Given that P={a, e, I, o, u} and Q={a, b, c, d}.What is (P∪Q) ?
3. Set S={ o, p q, r, s} and set T={m, n, o, p}.List down all the elements of set (S∪T)
4. M={b, o, y, s} and N={c, a, m, b, s}List down all the elements of set (M∪N).
5.

Finding the number of elements in a Union set.

Example;

Set F={c,a,r,e,s} and G={c,o,n,e,s}. Find n(F∪G)

F={c, a, r, e, s }

G={c, o, n, e, s }

F∪G={c ,e ,a, r ,s ,o ,n}

n(F∪G)=7.

Exercise 1i

1. If set D={1, 2, 3, 4, ,5} and set C={2, 4, 6, 8}. Find n (D∪C).
2. Given that P={a, e, I, o, u} and Q={a, b, c, d}.What is n (P∪Q) ?
3. Set W={ o, p q, r, s} and set R={m, n, o, p}.How many elements are in W∪R?
4. M={b, o, y, s} and N={c, a, m, b, s}How many members are in M∪N?.
5.

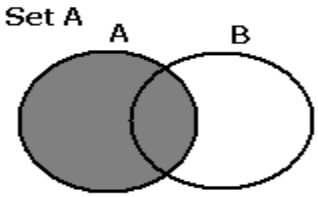
Revision

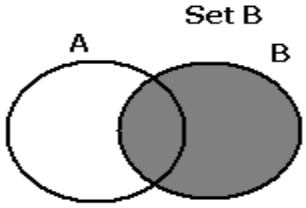
Name the following set symbols;

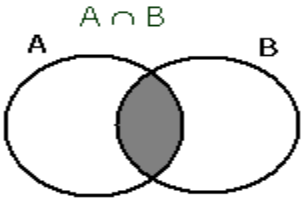
1. = ; _____
2. ≠;_____
3. ↔;_____
4. ∅ ;_____
5. ∈ ; Is a member of or an element of
6. ∪;_____
7. Is not a member of ∉

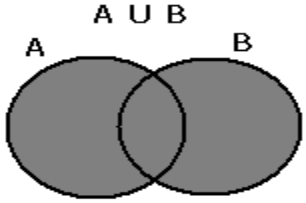
8. Number of members in set P n(P)

Shading regions on a Venn diagram





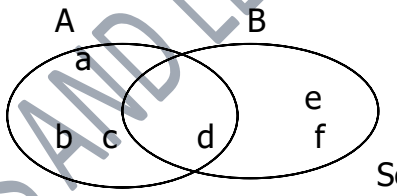




Using Venn diagrams to solve set problems.

Example 1 :-

Study the Venn diagram below and answer the questions that follow;



a) List down all the elements of set A.
set A={a, b, c, d}

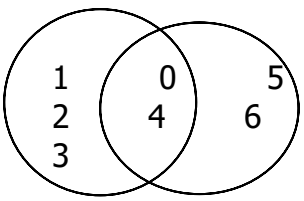
b) List the members of set B.
Set B = {d, e, f}

c) Find; i) $A \cap B$.
$A \cap B = \{d\}$

ii) $A \cup B$.
$A \cup B = \{a, b, c, d, e, f\}$

Example 2.

Study the Venn diagram below and use it to answer the questions that follow;



a) Find n(J)
Set J={0, 1,2, 3, 4}
n(J)=5

b) How many members are in set K?
Set K={0,4,5,6}
There are 4 elements in set K.
OR; n(K) =4

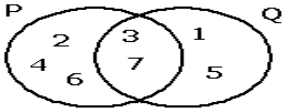
c) $n(J \cap K)$.
$J \cap K = \{0,4\}$

$n(J \cap K) = 2$

d) List down all the elements in set $J \cup K$.
$J \cup K = \{0,1,2,3,4,5,6\}$.

Exercise 1J

Study the Venn diagram below and answer the questions that follow;

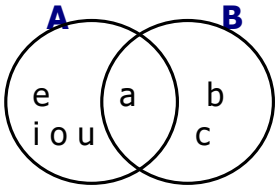


a) List down all the elements of set P.
b) Find PUQ
c) How many members are in set P∩Q
d) What is n(Q)?

FILLING IN VENN DIAGRAMS

Example 1:-

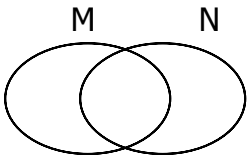
Given that Set A = { a , e , i , o , u } and set B = { a , b , c , d , }
a) Fill in the Venn diagram below using set A and B
Note; Start with the intersection part.



b) How many members are in set A?
c) , Find;
i) n(B) ii) A ∩ B ii) n(A U B)

Exercise 1K

1. If set M = { 1 , 2 , 3 , 4 , 5} and set N = { 0 , 2 , 4 }
a) Fill in the Venn diagram using set M and N.



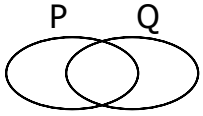
b) Find; n (M).

c) How many elements are in set N?

d) n(M∩N) e) n(M∪N)

TOPICAL TEST 1:

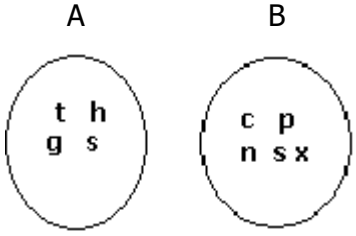
1. Set F = {flies as big as a cow}. Name set F.
2. Draw a set of 4 trees.
3. Shade P∪Q in the diagram below:



4. Name the following set symbols; a) {} b) ↔ c) ≠
5. Given that set F={0, 2, 4,6,8}.Find n(F)
6. If set Q={a, e, i, o, u} and set R={a, b, c, d, e}. a)How many members are in set Q∩R? b)Find Q∪R
7. Use: =, ≠ or ∅ to complete the following.
   a) Set H={1, 2, 3, 4, 5} _____Set G={a, b, c, d}
   b) A set of men who are pregnant_____
   c) Set W 

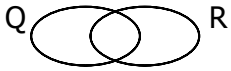
_____Set R 

8. Study the Venn diagram below and answer the questions that follow;



a) Find; A U B
b) How many members are in A n B?
c) Find; n(B)
d) List down all the elements of set A.

9. Given that set Q={a, e, I, o, u} and set R={a, b, c, d, e}.
   a. Complete the Venn diagram below using set Q and R above



NUMERATION SYSTEMS AND PLACE VALUES.

PLACE VALUES.

ONES, TENS, HUNDREDS, THOUSANDS:

EXAMPLE:

What is the place value of 3 in the 4325 ?

THOUSANDS	HUNDREDS	TENS	ONES
4	3	2	5

The place value of 3 in the number 4325 is Hundreds.

Exercises 2a

Write the place values of the underlined digits.

a) 89**2**1 b)**3**367 c) **1**02 d) 64**9** e) **5**720

Exercise 2b

Complete the following:

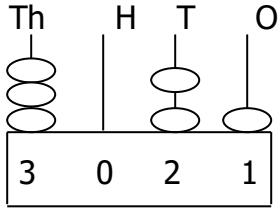
a) 4675= _thousands,_hundreds, __tens,__ones.
b) 904 = _hundreds __tens __ones.
c) 4341= _thousands__hundreds__tens__ones.
d) 3046=_thousands__hundreds_tens _ones.
e) 5890=_thousands _hundreds_tens_ones.

USING AN ABACUS

FINDING NUMBERS SHOWN ON THE ABACUS:

Example 1.

What number is shown on the abacus?

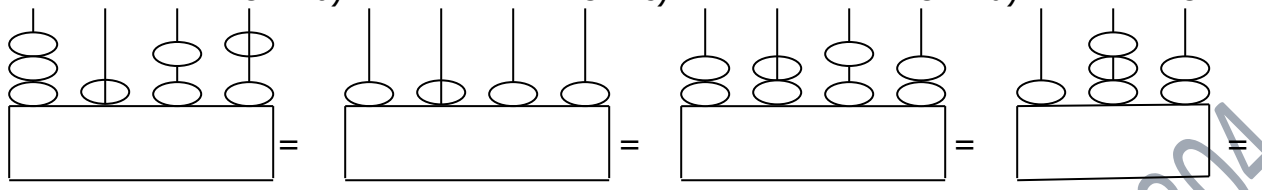


=3021

Exercises 2 c

What numbers have been shown on the abacus ?

a) TH H T O b) Th H T O c) Th H T O d) H T O

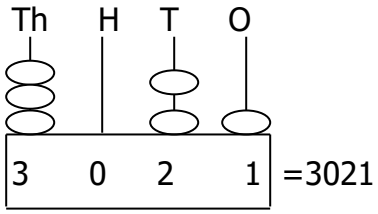


= = = =

REPRESENTING NUMBERS ON THE ABACUS.

Example;

Show 3021 on the abacus.



=3021

Exercises 2 d

Show the following numbers on the abacus.

a) 656 b) 3601 c)210 d)5372 e) 7521 f) 426.

FINDING THE TOTAL VALUES OF NUMBERS.

Example 1:-

Find the total value of 4 in the number:

a) 148.

H T O

1 4 8

↳ 4 tens = 4 x 10

= 40.

b) 4580

Th H T O

4 5 8 0

↳ 4 thousands=4x1000

=4000.

Exercise 2e:

1. Calculate the value of the underlined digits :

a) **5**642 b) 6**9**32 c) 10**6**4 d) 97**8** e) **2**108 f) 5**4**97

ADDITION OF VALUES ;

Example:-

7 tens + 5ones=

= (7 x10) + (5 x 1)

= 70 + 5

= 75.

Exercise 2f

Let us workout the following :

1. 2tens plus 2 ones. 2) 5hundreds +4 tens
3. 6thousands +6hundreds.
4. 8hundreds +6tens +7ones.
5. 3thousands and 3tens.

Subtraction of Values

Example

1. 5 tens – 3tens =

= (5 x 10) – (3x10)

EXERCISE 2g

Workout the following :

1. 4tens -2tens. 2) 3hundreds minus 1hundred

= 50 – 30
= 20.

3. 8thousands -7thousands.

Multipulication of values

Example

4 tens x 6 ones =
= (4 x 10) x (6 x 1)
= 40 x 6
= 240.

Exercise 2h

Workout the following ;

1. 2tens x 3ones 2) 4hundreds x 4ones.
3. 8tens x2 4) 5thousands x3

WRITING IN WORDS.

Example:-

Write 6427 in words.

TH H units
6 4 2 7

6000 = Six thousand.
400= Four hundred.
27= Twenty-seven.
∴6427 = Six thousand four hundred twenty seven.

Exercise 2i.

Write the following in words

a) 435 b) 8648 c)2001 d)6500 e)4095 f)8103

Writing in figures

Example:-

Write two thousand four hundred ten in figures.
Two thousand = 2000
Four hundred = 400
Ten = + 10
2410

Exercise 2j

Write the following in figures.

1. Three thousand, twenty two.
2. Five hundred five.
3. Two thousand, two hundred two.
4. Six thousand, four hundred ninety.
5. Nine thousand nineteen.

WRITING NUMBERS IN EXPANDED FORM

Example:-

Expand 312

H T O
3 1 2

312= (3 hundreds) + (1 tens) + (2 Ones)
= (3 x 100) + (1 x 10) + (2 x 1)

Method II

H T O
3 1 2

2x1 =2
1x10=10
3x100=300

Note: Write from down upwards.

312 =300 +10 +2

Exercise 2K

Write the following in expanded form

1. 275 2) 7856 3)1002 4)5471 5)8509

2. Expand 5748 using values

TH H T O
5 7 4 8

5748= (5 thousands) + (7 hundreds) + (4 tens) + (8 ones)
= (5 x 1000) + (7 x 100) + (4 x 10) + (8 x 1)
= 5000 + 700 + 40 + 8.

Method II

TH	H	T	O
5	7	4	8

8x1=8
4x10=40
7x100=700
5x1000 =5000

5748=5000 +700 +40 +8

FINDING OUT THE EXPANDED NUMBER

Example:-

1. Which number is shown by this expansion;7000 + 40 + 8?

TH	H	T	O
7	0	0	0
		4	0
+			8
7	0	4	8

2 Which number has been expanded to give;
(4x1000)+(7x100)+(5x10)+(6x1)?

4x 1000=	4	0	0	0
7x100 =		7	0	0
5x10 =			5	0
6x1 = +				6
	4	7	5	6

Exercise 2L

What number has been expanded to give:

1. 6000+60+6 2). (2x100) + (3x10)+(8x1) 3)7000 +300 +50 +6
4. (9x1000) +(2x100) +(3x10) 5). 4000+ 500 +60 +2

ROMAN NUMERALS

- Major Roman numerals are:-

I	V	X
1	5	10

The Hindu –Arabic numerals are ;0, 1, 2, 3, 4, 5, 6, 7, 8 and 9

- Roman numerals got by adding 1 are;2 and 3

2 = 1+ 1 =I + I =II

3= 1 +1+ 1 = I + I +I =III

➢ Roman numerals got by adding to 5 are 6, 7, 8

- The Roman numeral got by subtracting are;. 4, 9

4=5-1 9=10-1

=V-I =X-I
=IV =IX

NOTE;

- Roman numerals which can never be repeated are V
- Roman numerals are not repeated more than three times.

Expressing Hindu Arabic numeral as Roman Numerals

Example:- (Expand and change to Roman numerals.)

1. 19 = 10 + 9 s/w
= X + IX 10
= XIX +9
19

2. 36 = 30 + 6
= XXX + VI
= XXXVI

Exercise 2m

Write the following as Roman numerals:

1. a) 8 b) 15 c) 24 d) 39 e)12 f)28
2. Ann is 14years old. Write her age in Roman numerals.
3. John has 26 cows. How many cows does he have in Roman numerals?

Changing Roman numerals to Hindu Arabic numerals

Note; Expand and change to Hindu Arabic numerals

Example: -

XIX = X + IX s/w
= 10 + 9
= 19 10
+9
19

or XIX =
X = 10
IX = +9
= 19 Ans.

Exercise 2n

Change the following to Hindu-Arabic numerals.

1. a) XXII b) XIV c) XXXV d)XVIII
2. Jane is XI years old. Write her age in Hindu-Arabic numerals.
3. Henry weighs XXXVI kilograms. Find his age in Hindu-Arabic numerals.

TOPICAL REVISION.

1. a) Write ;Three thousand three in figures. b) Write 24 in Roman numerals.
2. Complete; 2436=_thousands_hundreds_tens _ones.
3. What number has been expanded to give; 4000+400+4?
4. John is XXXVII years old. Write his age in Hindu-Arabic Numerals.
5. Workout; a) 4tens and 3ones. b) 6hundreds -4hundreds. c) 2thousands x3
6. Given the number; 6390.
   a) Write the place value of 3 in the number above.
   b) Write the digit that is in the place of tens in the number above.
   c) Calculate the value of 6 in the number above.
   d) Express the above number in expanded notation.
   e) Write the above number in words.

OPERATIONS ON NUMBERS;

ADDITION;

ADDI WITHOUT CARRYING.

Example: -

1. 542 + 22 = 564
2. 6241 + 3333 = 9574
3. 15 + 22 + 10 = 15 + 22 + 10 = 47

Exercise 3a

Workout the following;

1. a) 78 + 1 b) 82 + 16 c) 436 + 33 d) 572 + 427 e) 6233 + 222 f) 5555 + 4444

WORD PROBLEMS INVOLVING ADDITION WITHOUT REGROUPING.

KEY WORDS;

Add, sum, total, increase, altogether etc

Exercise 3b.

1) Add 342 + 56 2) Increase 4230 by 432 3) Find the sum of 65 apples and 33 apples.

4) Nancy had 224 cows. Her father gave her 33 more cows. How many cows did she have altogether?

5) What number is 4 more than 96?

ADDITION OF 2-DIGIT NUMBERS WITH CARRYING OR RE-GROUPING.

Example:-

1. $\overset{1}{4}6 + 4 = 50$

6 +4 =10 so Write 0 under ones and carry 1 to the tens place value.

2) $\overset{1}{3}8 + 56 = 94$

8+6 =14 so write 4 under ones and carry 1 to the tens place value.

Exercise 3c

Workout the following;

1. 35 +6 2) 84 +17 3) 22 +98 4) 46 +44 5) 75 +17 6) 69 +88

7. Add 57 +87 8) Increase 36 by 99 9) What number is 16 more than 27?

10) Mary had 47 books. She bought 23 more books.How many books does she have in total?

ADDITION OF 3-DIGIT NUMBERS WITH CARRYING OR RE-GROUPING.

Example:-

1. $\overset{1}{5}37 + 47 = 584$

7+7=14 so write 4 under ones and carry 1 to tens.

2) $\overset{1}{8}76 + 115 = 991$

6+5=11 so write 1 under ones and carry 1 to tens.

Exercise 3c

Workout the following;

1. 154 +36 2) 658 +222 3) 927 +88 4) 580 +237 5) 417 +758 6) 563 +559

7. In Kabojja Junior School, there are 354 boys and 478 girls.How many pupils are there altogether?
8. A farmer collected 873 bags of rice in June and 59 bags in July. How many bags did the farmer collect in the two months.
9. In a certain village, there are 752 men and 648 women. Find the total number of people in that village.
10. Add 529 mangoes to 865 mangoes.

ADDITION OF 4-DIGIT NUMBERS WITH CARRYING OR RE-GROUPING.

Example:-

1. $\begin{array}{r} {\scriptstyle 1} \\ 4335 \\ +335 \\ \hline 4670 \\ {\scriptstyle 10} \end{array}$ 5+5=10.Write 0 under ones and carry 1 to tens.

2) $\begin{array}{r} {\scriptstyle 1\,1} \\ 674\,2 \\ +2159 \\ \hline 8901 \\ {\scriptstyle 10\,11} \end{array}$ 2+9=11so write 1under ones and carry 1 to tens. 1+4+5=10 so write 0 under tens and carry 1 to hundreds.

Exercise 3d

Workout the following;

1.	2)	3)	4)	5)	6)	7)	8)
5371	7947	1538	7463	8051	9867	3445	2222
+529	+1166	+5543	+2457	+1889	+177	+4888	+5999
____	____	____	____	____	____	____	____

SUBTRACTION

SUBTRACTION WITHOUT BORROWING OR RE-GROUPING.

Example:-

1.	2)	3)	4)	5)	6)
45	59	672	323	2354	8592
-3	-24	-60	-222	-334	-7450
42	35	612	101	2020	1142

Exercise 3e

Workout the following;

1.	2)	3)	4)	5)	6)	7)	8)	9)
76	54	896	8964	2324	7290	567	9522	6238
-2	-34	-55	-854	-1111	-230	-333	-7310	-222
____	____	____	____	____	____	____	____	____

WORD PROBLEMS

Key words

Decrease, minus, remove, reduce, subtract, difference, take away, Less than.

EXAMPLES:

1. Subtract 24 from 648.

$$\begin{array}{r} 648 \\ -\ 24 \\ \hline 622 \\ \hline \end{array}$$

2) What number is 15 less than 79?

$$\begin{array}{r} 79 \\ -\ 15 \\ \hline 64 \\ \hline \end{array}$$

Exercise 3f

Workout the following;

1. What is the difference between 643 and 231? 2) Decrease 5489 by 213. 3) What is 83 take away 40?
4. Sarah had 25 apples. If she ate 20apples, How many apples did she remain with?
5. Bob had sh. 300 and used sh. 200 to buy a pen, How much did he remain with?
6. In a certain school, there are 890 pupils. If there are 350 boys, how many girls are there?
7. Winny is 6 years younger than Jane. If Jane is 9 years old. a) How old is Winny?
b) How old was Jane 4 years ago?
8. Subtract 56 from 97 9) Reduce 763 by 222

SUBTRACTION OF 2 DIGIT NUMBERS WITH BORROWING;

Example:-

1. $\begin{array}{r} {}^{2}\cancel{3}\,{}^{10}\cancel{0} \\ -\ 14 \\ \hline 16 \\ \hline \end{array}$ 0 -4 is impossible so borrow 1ten from 3 tens and add it to 0. So 0+10 =10.Therefore 10-4=6.

2) $\begin{array}{r} {}^{5}\cancel{6}\,{}^{15}\cancel{5} \\ -\ 37 \\ \hline 28 \\ \hline \end{array}$ 5-7 is impossible so borrow 1 ten from 6tens and add it to 5. So 5 +10=15. Therefore 15-7=8

Exercise 3g

Subtract the following:

1. $\begin{array}{r} 50 \\ -31 \\ \hline \\ \hline \end{array}$ 2) $\begin{array}{r} 72 \\ -55 \\ \hline \\ \hline \end{array}$ 3) $\begin{array}{r} 44 \\ -17 \\ \hline \\ \hline \end{array}$ 4) $\begin{array}{r} 23 \\ -14 \\ \hline \\ \hline \end{array}$ 5) $\begin{array}{r} 86 \\ -68 \\ \hline \\ \hline \end{array}$ 6) $\begin{array}{r} 31 \\ -29 \\ \hline \\ \hline \end{array}$

7. Reduce 82 by 47. 8) Subtract 34 from 80 9) What number is 14 less than 32
10. A farmer had 61 cows, if 19 of them died. How many cows remained?
11. In Primary three class, there are 95 pupils. If 36 of them are girls, how many boys are there?

SUBTRACTION OF 3- DIGIT NUMBERS WITH BORROWING;

Example:-

1. $\begin{array}{r} 2\,\cancel{3}^{2}\,\cancel{0}^{10} \\ -\,1\;4 \\ \hline 2\;1\;6 \end{array}$

0 -4 is impossible so borrow 1ten from 3 tens and add it to 0.
So 0+10 =10. Therefore 10-4=6.

2) $\begin{array}{r} 3\,\cancel{6}^{5}\,\cancel{7}^{15} \\ -\,2\;3\;7 \\ \hline 1\;2\;8 \end{array}$

5-7 is impossible so borrow 1 ten from 6tens and add it to 5. So 5 +10=15. Therefore 15-7=8

Exercise 3 h

Subtract the following:

1. 753 − 24 = ____
2) 941 − 833 = ____
3) 410 − 109 = ____
4) 666 − 47 = ____
5) 748 − 519 = ____
6) 138 − 156 = ____

SUBTRACTION OF 4- DIGIT NUMBERS WITH BORROWING;

Example 1:

$\begin{array}{r} 3\;\;12\;11\;10 \\ \cancel{4}\;\cancel{3}\;\cancel{2}\;\cancel{0} \\ -\;6\;5\;1 \\ \hline 3\;6\;6\;9 \end{array}$

MULTIPLICATION

Multiplication is repeated addition.

Meaning of multiplication.

Example;

4x 6 means four groups of six

4 x 6 = 6+6+6+6

=24

Exercise.

WORD PROBLEMS;

Key words.

Multiply, times, product, multiple.

Example:-

A spider has 8 legs. How many legs do 3 spiders have?

One spider has 8 legs .
3 spiders have (8x3)legs.
=24 legs.

SIMPLE MULTIPLICATION

Example:-

a) 3 x 2 = 6 b) 9 x 7 = 63

Exercise.4b

Exercise 4c

Multiplication 2 by 1 digits without carrying:

a) 13 x3 = 39

b) 20 x4 = 80

Exercise

WORD PROBLEMS;

Example:-

One year has 12 months. How many months are there in 4 years?

1 year ⟶ 12 months.

4 years ⟶ (12 x 4) months

= 48 months.

Exercise 4e

Multiplication of 2 by 1 digit with carrying:

Examples:

1. $\begin{array}{r} {\scriptstyle 1\ \ } \\ 24 \\ \times\ 3 \\ \hline 72 \\ {\scriptstyle 12\ \ } \end{array}$ First multiply before adding ie 3x2=6 +1 =7

2. $\begin{array}{r} {\scriptstyle 1\ \ } \\ 15 \\ \times\ 2 \\ \hline 30 \\ {\scriptstyle 10\ \ } \end{array}$

Multiplying 3 by 1 digit numbers.

Examples

1. $\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 123 \\ \times\ \ 4 \\ \hline 492 \\ {\scriptstyle 12\ \ \ } \end{array}$

2. $\begin{array}{r} {\scriptstyle 1\ \ \ } \\ 234 \\ \times\ \ 3 \\ \hline 702 \\ {\scriptstyle 10\ 12} \end{array}$

Multiplying 4 by 1 digit numbers.

Examples

1. $\begin{array}{r} {\scriptstyle 1\ \ \ \ } \\ 1103 \\ \times\ \ \ 5 \\ \hline 5515 \\ {\scriptstyle 15\ \ \ \ } \end{array}$

2. $\begin{array}{r} {\scriptstyle 1\ 1\ \ \ } \\ 1057 \\ \times\ \ \ 2 \\ \hline 2114 \\ {\scriptstyle 11\ 14} \end{array}$

DIVISION;

SIMPLE DIVISION WITHOUT A REMAINDER

Example:-

a) $6 \div 6 = 1$ b) $8 \div 2 = 4$

Exercise 5a

Using long division

Example:-

1. $3 \overline{)9}$ with $3 \times 3 = 9$, remainder 0, quotient 3

2) $2 \overline{)2}$ with $1 \times 2 = 2$, remainder 0, quotient 1

Exercise

Word problems.

Key words.

Share, divide.

Example;

1. Share 8 books among 4 pupils. How many does each child get?

8books ÷4 =2books.

2. How many groups of three are in 6?

Division involving 2-digit numbers.

Example 1

$2 \overline{)22}$ quotient 11

$1 \times 2 = 2$, remainder 02

$1 \times 2 = 2$, remainder 0

Division involving 3-digit numbers.

Example 1

$2 \overline{)224}$ quotient 112

$1 \times 2 = 2$, remainder 02

$1 \times 2 = 2$, remainder 04

$2 \times 2 = 4$, remainder 0

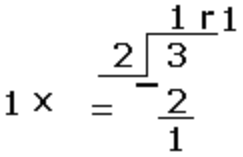
SIMPLE DIVISION WITH A REMAINDER

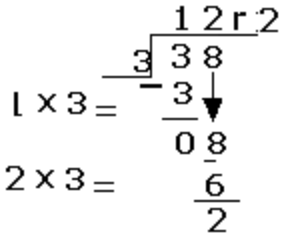
Examples

a) $5 \div 2 = 2$ r 1 b) $7 \div 3 = 2$ r 1

Division with a remainder using long division.

Examples





Exercise. 6c page 73.

WORD PROBLEMS

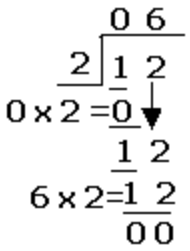
Example.

Share 23 sweets between 2 boys.

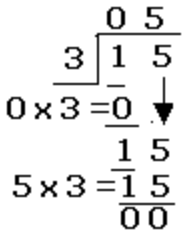
DIVISION INVOLVING COMPLEX PROBLEMS.

Examples:

1.



2.



Exercise. 6b page 73 , Ex 6d pg74 ,Ex 6f pg75 .

Word problems.

Example;

Share 36 pens among 9 pupils.

Exercise. 6g page 76-77.