MATHEMATICS NOTES FOR PRIMARY TWO THIRD TERM.

Measures

Lesson one

Time (revision work of primary one)

Telling time by the hour.

A clock face may have 2 or 3 hands. Emphasize the two i.e The minute hand and the hour hand.

The long hand is the minute hand.

The short hand tells us the hour.

The clock face has numbers 1 – 12

Note: 1 hour = 60 minutes

$\frac{1}{2}$ an hour = 30 minutes

$\frac{1}{4}$ an hour = 15 minutes

1 day = 24 hours

$\frac{1}{2}$ a day = 12 hours

A day starts at midnight and ends at ……

Practice telling time by the hour using individual clock faces.

REFERENCE and MORE WORK:

Fountain Mathematics pupils bk 2 pg 146 – 152

Primary Mathematics for Uganda bk 2 pg 100 (check 33)

Lesson two

Telling time in half hours. (Revision)

Note:

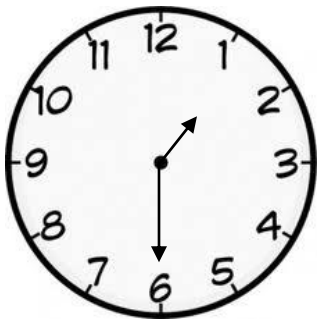
In one hour the minute hand goes round the clock face and these are sixty minutes, (**60 minutes**)

From one number to another these are five minutes. (You can practice counting in fives)

In an hour, the hour hand moves from only one number to the next on the clock face.

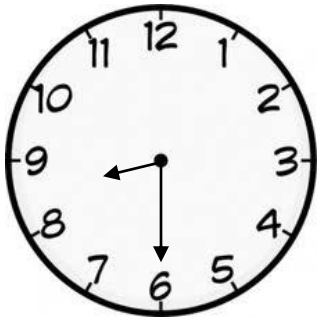
When the minute hand goes half way the clock face, the time is half past the hour.

e.g



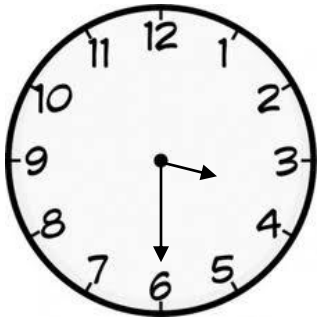
It is half past 1

It is $\frac{1}{2}$ past 1.



It is half past 8

It is $\frac{1}{2}$ past 8



It is half past 3

$\frac{1}{2}$ past 3.

When it is half past, the position of the minute hand is always pointing at 6. The hand is half way past the hour.

REFERENCE AND MORE WORK:

Primary Mathematics for Uganda bk. 2 pg 101.

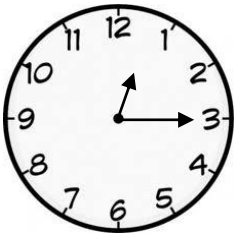
MK Primary Mathematics bk 2.

LESSON THREE AND FOUR

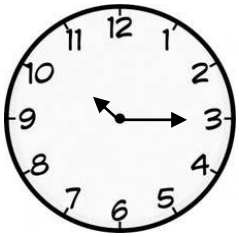
Telling time (a quarter past)

Children will be helped to count the small markings between each two figures showing minutes.

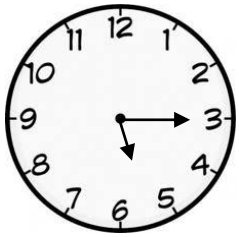
When they count up to 15 minutes teach them the word a quarter past.



It is a quarter past 12.



It is a quarter past 10



It is a quarter past five.

When it is a quarter past, the minute hand always points at 3 and the hour hand is slightly past the hour.

The proper movement of the hands is clockwise.

Tell the time practically before doing a written exercise.

Reference and more work:

E A E P – Primary Mathematics bk 2 pg 57 - 59.

Mk Primary Mathematics bk 2 pg 131 – 132.

LESSON FIVE AND SIX

DURATION

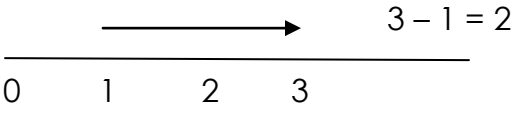
Duration is the time taken for an activity to be done.

Duration is got by **subtracting** the **starting time** from the **ending time**.

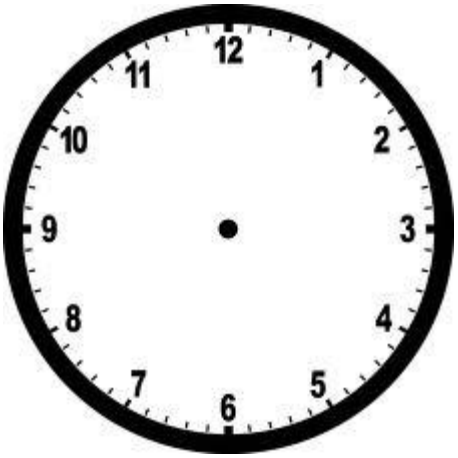
You can also find out duration using a clock face. (This is the simplest method for the children)

Examples

1. Baby Norah slept at 1:00 o'clock and woke up at 3:00 o'clock. For how long did the baby sleep?

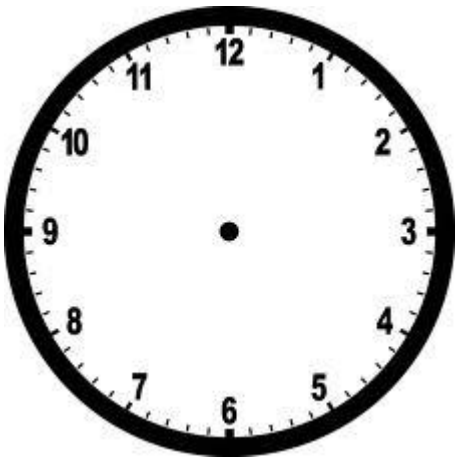


The baby slept for 2 hours.



Or

2. Dumba left school at 5:00 o'clock and reached home at 6:00 o'clock. How long did this journey take? 6:00 – 5:00 = 1 hour. Or



EXERCISE

1. If today is Monday, what day will it be after 2 days?

2. A farmer started digging at 8:00 o'clock and ended at 11: o'clock. For how long did he dig in his garden**?**

3. A bus started moving at 7;00 o'clock and reached Mubende at 3;00 o'clock. How long was the journey**?**

4. Desmond does his homework for 2 hours, if he starts at 4;00 o'clock, when will he end**?**

5. We spend 2 hours in assembly every Friday, if we end at 9;00 o'clock, when do we start**?**

Reference:

Trs. own collection.

LESSON SEVEN

Revision of P.1 work

DAYS OF THE WEEK

Talk about Days of the week and months of the year.

A week begins on Sunday and ends on Saturday.

Write the days in full and in short.

Sunday - Sun.

Monday - Mon.

Tuesday - Tue.

Wednesday - Wed.

Thursday - Thur.

Friday - Fri.

Saturday - Sat

EXERCISE; 1

1. What is the first day of the week**?**
2. Which day comes after Friday**?**
3. Tuesday comes between ---------- and ----------.
4. If today is Monday, which day will it be after to days**?**
5. How many days make a fortnight**?**
6. How many hours make a day?

Exercise;2 Revise table 7 and complete the table to show the numbers of weeks and days.

MONTHS OF THE YEAR

Months for the year and their days

January - 31

February - 28 or 29

March - 31

April - 30

May - 31

June - 30

July - 31

August - 31

September - 30

October - 31

November - 30

December - 31

Children will learn the rhyme.

- Thirty days has September, April, June and November.

All the rest have thirty one except February alone.

For it has 28 days or 29 in a leap year.

Exercise

1. How many months make a year?
2. How many weeks are in a month?
3. Which month comes before June?
4. What is the fifth month of the year?
5. _____ months are in half a year.

Reference and more work:

Mk Primary Mathematics of bk 2 pgs 133 – 134.

Primary Mathematics for Uganda bk 2 pg 40.

LESSON EIGHT

Calendar

Use the calendars in class or send for old calendars from home.

Let pupils observe / study the calendar and note the following;

The months shown

The next month

The month before the next shown.

The first and last day of the month.

Dates which are highlighted. (public holidays)

Reference

MK Primary Mathematics 2000 page 138.

E.A.E.P Primary Mathematics bk 2 pg 56

LESSON NINE

TOPICAL TEST

1. What is the first day of the week?

   Sunday.

2. How many days are there in 3 weeks?

   1 week = 7days

   3 weeks = 3 x 7 days

   = 21 days

3. Write these short forms in full.

   Tue – **Tuesday** Aug – **August**

   Wed – **Wednesday** Dec – **December**

4. How many months are there in one year? **12 months**

5. Write two months which have thirty days. **April, June, September or November.**

6. How many hours make a day?

7. Show the time.

a) Two o'clock b) half past 7. c) quarter past 11 o;clock

LESSON EIGHT AND NINE

Multiplication of numbers with re-grouping.

Example.

(a) 1 5 (b) 2 4 4 X 4 = 16

X 3 x 4 4 X 2 = 8 +1 = 9

_____ _____

_____ ___9__6__

Activity 1

(a) 2 2 (b) 1 4 (c) 2 3 (d) 3 4

X 6 x 7 x 6 x 3

_____ _____ _____ _____

_____ _____ _____ _____

Activity 2

(a) 13 x 4

1 3

X 4

---

5 2

(b) 14 x 5 =

(d) 23 x4 =

(c) 12 x 7 =

(e) 13 x 5=

PD 3 & 4

Word problems involving multiplication of numbers with re –grouping.

(a) If there are 13 pencils in tin . How many pencils are there in 4tins.

(b) There are 3 legs on a stool. How many legs are there on 15 stools**?**

(c) Each boy has 3 cows .How many cows do 17 boys have**?**

(d) There are 5 fish in each basket. How many fish are there in 12 bags.

FIND MORE NUMBERS IN MK BK 3 PG 58

(a) Mummy shared 18 cakes among 6 boys .How many cakes did each boy get**?**

(b) Teacher Ben shared 48 eggs equally between Jane and Mary.How many eggs did each one get?

(c) 36 bananas are shared equally among 3 children. How many bananas will each one get**?**

(d) If 21 pencils are shared among 7 pupils, how many pencils will each pupil get**?**

REFERENCE AND MORE WORK:

MK Primary bk 3 page 132.

LESSON TEN AND ELEVEN

Algebra

Algebraic equations involving multiplication.

1. Emphasize recitation of tables to recall and be able to apply this knowledge when solving the equation.

Examples

1. $\boxed{5} \times 3 = 15$

   $= 15 \div 3$ Check $5 \times 3 = 15$

   $= 5$

2. $\square \times 4 = 12$

   $= 12 \div 4$ Check $3 \times 4 = 12$

   $= 3$

When you are looking for the first gap, you divide the answer by the given number.

3. When you're looking for the gap in the middle, you divide the answer by the given number.

$8 \times \boxed{2} = 16$

$= 16 \div 8$

$= 2$

$10 \times \boxed{2} = 20$

$= 20 \div 10$

$= 2$

Reference and more work:

MK MTC bk 2 pg 103

Fountain primary mtc bk 2 pg 114

LESSON TWELVE

Measures

Money

Vocabulary

Money	change	features
Coins	buying	
Notes	selling	
Currency	cost	
Denominations	price	
Shillings	cheap	
Trade	conversation	
Barter	crested crane	
Bargain	purchase	

Money is what we use to buy things we need. It is in form of coins or paper notes with the value printed on them.

Background of money

People of long ago used to get things they wanted through barter trade ie exchanging different items because they did not have money.

(Talk about the advantages and disadvantages)

Indians introduced rupees. Afterwards, this money was replaced by the shilling which we use up to date.

LESSON TEN AND ELEVEN

Currency

Currency is the type of money that is used in a country. Different countries have different currencies.

e.g

Ugandan currency is **shillings**

Kenyan currency is **shillings**

Tanzanian currency is **shillings**

Nigerian currency is **Naira**

Rwandan currency **Francs**

American currency is **dollar**

UK currency is **pound.**

Uganda currency is in two forms.

Coins and **paper notes**. These are of different denominations.

Coins	**notes**
Shs 50	shs 1000
Shs 100	shs 2000
Shs 200	shs 5000
Shs 500	shs 10,000
Shs 1000	Shs 20,000
	Shs 50,000

Each denomination has features. Children will look at real money or specimen from newspapers.

Currency

Shs 50	coat of arm
Shs 100	a cow, coat of arm
Shs 200	fish, coat of arm
Shs 500	crested crane head, coat of arms
Shs 1000	coat of arms, crested crane

Notes

Shs 1000	kobs, coat of arm, monument
Shs 2000	fish swimming, monument, river, parliament, coat of arms
Shs 5000	nests and birds flying, monument, coat of arms, parliament, image of crested crane.
Shs 10,000	banana plantation, pottery, monument, waterfall, image of a crested crane.
Shs 20,000	river / lake, monument, cows grazing, coat of arm, image of crested crane, people holding a flag, coat of arms.
Shs 50,000	mountain gorillas, monument

Activity

Write the features of the different denominations.

T/Aids: **Real money, text books, specimen chart.**

Reference and more work.

MK Primary MTC bk 2 pgs 122 – 123.

MK Primary MTC Bk 2 pg 176.

LESSON TWELVE

Getting equivalent amount of money. (use real money)

Changing bigger denominations to smaller denominations e.g

a) Two coins of shs 50 are equivalent to 1 coin of shs 100.

   Shs 50 + shs 50 = 100

b) Five coins of shs 100 are equivalent to sh 500.

   Shs 100 + shs 100 + shs 100 + shs 100 + shs 100 = shs 500

Reference and more work:

Understanding Mathematics book 3 pg

LESSON THIRTEEN

Shopping

Vocabulary

Price list	customer
Balance	shopkeeper
Cost	cheap
How much	expensive
Change	expenditure

LESSON FOURTEEN AND FIFTEEN

Shopping game

Using the shopping language: [TRS HAVE A MODEL SHOP AND SHOPPING LIST]

Customer: Good morning / afternoon Sir / Madam

Shopkeeper: Good morning ……

Customer: May I have ……

Shopkeeper: Yes, you may.

Customer: How much does it cost?

Shopkeeper: …….. e.t.c

Children will use the class shop and price list. They will discuss the price list and identify the cheapest item and most expensive item. (They will use the words "cheap" and "expensive" to build their understanding)

LESSON SIXTEEN

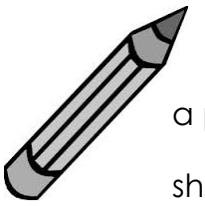
Buying and selling

Finding total expenditure basing on a price list.

Example

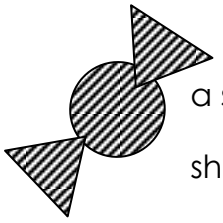
A book

Shs 300



a pencil

shs 200



a sweet

sh 100.

Pupils will study the price list then answer the questions.

a) How much will you pay if you buy a pencil?

b) How much will you pay for 2 books?

One book = sh 300

Two books = sh 300 Or sh 300

X 2 + sh 300

Sh 600 sh 600

c) How much money will you pay if you buy a book and a pencil?

A book sh 300

A pencil + sh 200

Sh 500

I will pay shs 500 for a book and a pencil.

d) What is the cheapest item?

LESSON SEVENTEEN

Finding (change) (subtraction)

Change is the money you get back when you give in more than the cost of the items you have bought. Example

You have a price list in a shop

A bottle of soda	sh 700
A cake	sh 300
Biscuits	sh 500
A bun	sh 100

a) If I have sh 500 and I buy a cake, how much will I remain with?

Sh 500

- sh 300

Shs 200

Joyce will remain with sh. 200.

Reference and more work:

Mk Primary MTC bk 2 pg 126 – 7.

Fountain Primary MTC bk 2 pgs 142 – 144

LESSON EIGHTEEN

TOPICAL TEST

Match correctly

1. Money — feature

   Shs 200 — cow

   Shs 100 — crested crane

   Shs 500 — head of a crested crane

   Shs. 1000 — fish

2. How much money do you have if you have 3 coins of shs 100?

   Sh 100 + sh 100 + sh 100 = sh 300

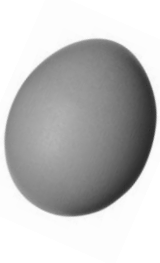
3. How many coins of sh 500 make one thousand shillings?

   Sh 500 + sh 500 = sh 1000

   2 coins of sh 500 make shs 1000.

4. If one apple cost shs 600, how much will two apples cost?

5. Study the price list.

 Sh. 700  sh. 500  sh. 200

a) What is the cheapest item?

b) How much will you pay for 2 eggs?

c) What is the total cost of a pineapple and an egg?

d) If you have shs 1000 and you buy one apple, how much money will you remain with?

(e) What is the cost of 3 eggs?

LESSON NINETEEN

Measures

AREA

definition

What is area?

Area is the number of square units which cover the surface of a figure.

It is the space a flat surface takes up.

2. To build understanding measure area use things like match boxes, papers, e.t.c

Practical work

Cut small squares of paper of the same size and fit them on a larger square piece of paper. Use glue to fix them.

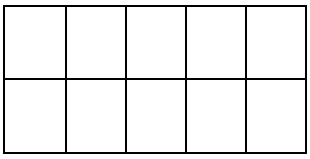
How many small squares are there in the larger square?

Compare areas of different objects.

Pupils will be introduced to counting squares covering a surface.

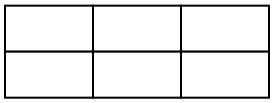
NOTE; The basic unit is square units./ sq.units.

Examples:

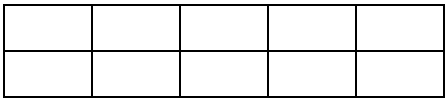


= 10 square units.

Find the area of the following figures by counting squares.



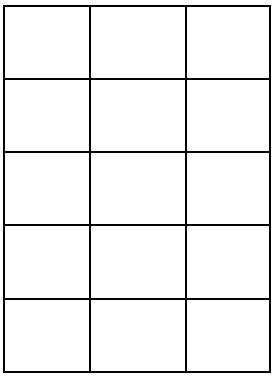
Area = 6 sq units.



Area = 10 sq units.

Exercise.

Find the area of the following by counting squares.



Reference and more work;

Fountain Primary mathematics bk 2 pg 159 – 160.

MK MTC bk 3.

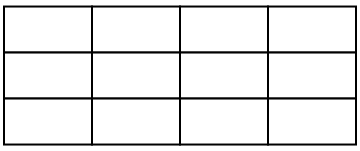
Primary mathematics for Uganda pg 107 – 109.

LESSON TWENTY and TWENTY ONE

Finding Area by multiplying

(Supplement the first exercise)

Multiply the number of squares across by the number of a square down words.



3 cm **NOTE**: ***Each unit is a cm.***

4 cm

A = 4 cm x 3 cm

A = 12 sq cm.

Reference and more work;

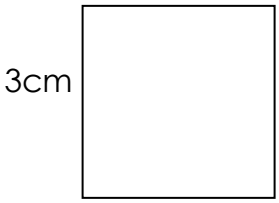
Fountain Primary mathematics bk 2 pg 159 – 160.

MK MTC bk 3.

Primary mathematics for Uganda pg 107 – 109.

LESSON TWENTY TWO and TWENTY THREE

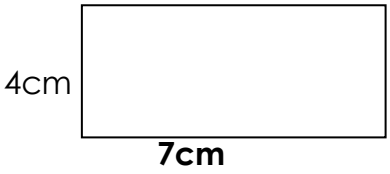
Finding area by multiplying when given length and width.



A = L × W

A = 3cm × 3cm

A = 9 square cm



A = L X W

A = 7cm x 4 cm

A = 28 square cm

Reference AND MORE WORK

MK MTC bk 3 pgs 156 – 158.

LESSON TWENTY FOUR AND TWENTY FIVE

Algebric equations in division

Apply the knowledge of tables

Note: To find the dividend, you multiply the quotient (answer) with the division or you can use the multiplication table.

Example

1. $\boxed{18} \div 3 = 6$

$= 6 \times 3$

$= 18$

x	3
1	3
2	6
3	9
4	12
5	15
6	18

The missing number is 18.

2. $\boxed{25} \div 5 = 5$

$= 5 \times 5$

$= 25$

x	5
1	5
2	10
3	15
4	20
5	25

The missing number is 25.

Finding the division

You divide the dividend by the quotient.

E.g

1. 12 ÷ ☐ = 6

   = 12 ÷ 6

   = 2

The missing number is 2.

Activity from

Reference:

MK MTC bk 2 pg 105 -106

Fountain Primary mtc bk 2 pg 114.

LESSON TWENTY SIX AND TWENTY SEVEN

TOPICAL TEST

1. ☐ X 6 = 12
2. ☐ X 5 = 10
3. 7 X ☐ = 21
4. 11 X ☐ = 44
5. 15 ÷ ☐ = 5
6. 24 ÷ ☐ = 6
7. ☐ ÷ 7 = 2
8. ☐ ÷ 9 = 3

Word problem

1. What number do I multiply by 5 to get 30?

   ☐ X 5 = 30

2. Think of a number divide it by 4. Your answer is 4. What is the number?

3. Which number do I multiply with 3 to get 27?
4. If I multiply 6 with a number in my head, I get 16, what is the number in my head?
5. Mariam has a number in her heart, if she multiplies it by 5, she gets 30, what is the number?

Reference

Primary mathematics for Uganda bk 2 pgs 52 – 53.

MK MTC bk 3 pgs 173 – 174.

LESSON; TWENTY EIGHT AND TWENTY NINE

MASS

Revision of mass using non standard measure.

Compare mass using non standard measures.

A

B

Which bucket holds more water.

<u>NOTE;</u> **Capacity is measured in litres.**

Addition of capacity using standard units.

Example : 1

1. 2 litres + 3 litres = 5 litres
2. 3 litres +2 litres + 4 litres =
3. 12 litres + 7 litres = __ litres
4. 332 litres + 421 litres = ___ litres

Exercise: MK book 3 page 164 – 166

Example : II

T	O		H	T	O
3	6 litres		4	2	7 litres
+ 4	3 litres	+	3	0	1 litres
7	9 litres		7	2	8 litres

Subtraction of litres

Examples

1. 7 litres – 4 litres = 3 litres
2. 24 litres – 8 litres = 16 litres
3. 466 litres – 13 litres =___ litres

Exercise

Subtract

a) 8 litres – 4 litres =

b) 65 litres – 3 litres =

c) 674 litres – 322 litres =

d) 786 litres – 12 litres =

e) 976 litres – 43 litres =

word problems

a) A shopkeeper had 56 litres of milk. He sold 12 litres of the milk to his customers How many litres remained?

b) Subtract sixty seven litres from ninety nine litres.

c) What is 864 litres less than 22 litres?

d) A builder uses 675 litres of water to mix the sand. If 23 litres are used for cooking, how many litres of water will remain?

NOTE: Include addition and subtraction in fractions

WEIGHT

TRICIA

a) Who is heavier**?**

b) Who is lighter?

MICHEAL

Reference and more work:

MK Primary MTC Bk. 2 pgs 146 – 147.

LESSON; THIRTY

Introduce the standard unit of mass the kilogram (kg)

Emphasize that the standard unit helps to give accurate measurements.

Talk about the smaller units and their equivalent

1kg = 1000gm

$\frac{1}{2}$ kg = 500gm ($\frac{1}{2}$ of 1000)

Refer to $\frac{1}{2}$ **of 10** then 100 then 1000. $\frac{1}{4}$ kg = 250gm

(Not easy to teach)

Talk about different weighing scales. Carry out a practical lesson of children weighing themselves using a weighing scale.

Note

As you carry out the exercise, emphasise the use of heavier than, 'lighter than', the 'same as' or none of them is heavier because they have the same weight.

Use another weighing scale which uses stones. (usually used in shops)

Let children weigh different objects.

REFERENCE AND MORE WORK

MK Primary MTC Bk 2 pgs 146 – 147.

LESSON; THIRTY ONE

Converting units of mass

Note: To change from a big unit to a smaller unit you multiply e.g change from kg to grams.

Example

Pupils should know that 1kg = 1000gm

Changing from kg to g

1. Change 3kg to g

   1kg = 1000g

   3kg = 3 × 1000g

   3kg = 3000g

or 1kg = 1000g

3kg = 1000g + 1000g +1000g

3kg = 3000g.

Exercise

Change the following kg to g

1. 2 kg to g
2. 4 kg to g
3. 8 kg to g
4. 5 kg to g
5. 6 kg to g

REFERENCE AND MORE WORK

MK Primary MTC Bk 2 pgs 148 – 149.

LESSON THIRTY TWO AND THIRTY THREE

Add mass (and this can be given as early morning exercise because it is the same concept of addition)

Examples

1. 10kg + 13kg = 23kg

   10kg

   +13 kg

   23kg

2. $\frac{1}{2}$ kg + $\frac{1}{2}$ kg = $\frac{1+1}{2}$ = $\frac{2}{2}$ = 1kg

3. (You can include numbers involving re-grouping for revision purposes)

   16kg + 8kg =

   T O

   1 6kg

   + 8kg

   2 4kg

Give some few word problems to help pupils read and interpret e.g

1. Sarah weighs 45kg and her sister Norah weighs 50kg. Who is heavier (or who is lighter)?

   Norah is heavier than Sarah or ……..

2. Find their total mass.

   4 5kg

   + 5 0kg

   9 5 kg. Their total mass is 95 kg.

REFERENCE AND MORE WORK:

Primary Mathematics for Uganda bk 2 pgs 50-52.

LESSON THIRTY FOUR

Subtraction (can be done as an early morning exercise)

Examples

1. 18kg - 4kg =

   1 8kg

   - 4kg

   1 4 kg

2. 4 2kg

   - 2 0 kg

   2 2 kg

3. 2 3 6 kg

   - 1 2 3 kg

   1 1 3 kg

Give some word problems.

E.g

1. A sack of potatoes weighs 50kg. If 20kg of the potatoes are sold, what mass of potatoes will be left?

   50 kg

   - 20 kg

   30 kg

2. 28 kg of sugar take away 14kg of sugar.

   2 8 kg

   - 1 4 kg

   1 4 kg

REFERENCE AND MORE WORK

Primary Mathematics for Uganda bk 2 pg 52 – 53.

LESSON THIRTY FIVE

TOPICAL TEST

Wasswa

1. Kato

a) Who is heavier? b) Who is lighter ?

2. Change to kg

a) 7kg - g

1kg - 1000g

7KG - 7 X 1000g

7kg - 7000g

b) 4kg - g

1kg - 1000g

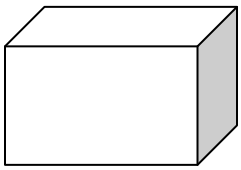
4KG - 4 X 1000g

4kg - 4000g

3. Which is heavier, a kilogram of sugar o a kilogram of grass?

None of them is heavier.

They have the same weight (equal)



4. a) 12kg b)  11kg

a) Find the total mass of the two objects.

1 2 kg

+ 1 1 kg

2 3 kg

Their mass is 23 kg

b) Subtract the mass of object b from object a.

1 2 kg

- 1 1 kg

0 1 kg

The answer is 1 kg.