LESSON NOTES FOR P.5 AUGUST WEEK 6: LESSON ONE

TOPIC: FRACTIONS
WORD PROBLEMS INVOLVING ADDITION OF FRACTIONS

Example I

John filled ½ of a tank with water in the morning and $^2/_5$ in the afternoon. what fraction of the tank was full with water?

Morning + Afternoon

½ + $^2/_5$ **LCM of 2 and 5 = 10**

$= \dfrac{5 + 4}{10}$

$= \mathbf{^9/_{10}}$

The tank was filled with $^9/_{10}$

Example II

Abdel had 1½ cakes. Jane had $2^3/_4$ cakes of a cake. How many cakes did they have altogether?

$1^1/_2$ + +$2^3/_4$

$1 + 2 + \dfrac{2+3}{4}$

$3 + \left(\dfrac{5}{4}\right)$———— Change to a mixed number

$3 + 1\dfrac{1}{4}$

$4\dfrac{1}{4}$

They had $4^1/_4$ cakes altogether.

EXERCISE

1. $^2/_3$ of the seats in a bus is filled by adults and ¼ by children. What fraction of the seats in the bus is occupied?

2. A worker painted 3 $^1/_9$ wall on Monday and $^4/_9$ on Tuesday. What fraction of the house was painted on Monday?

3. In a school library, $^5/_{15}$ of the books are mathematics, $^1/_6$ of the books are English and $^1/_3$ are Science. What fraction do the three books represent altogether?

4. A mother gave sugar canes to her children. The daughter got 1 ½ and the son got 2 ¼ How many sugarcanes are these altogether?

LESSON TWO

SUBTRACTION OF FRACTIONS

Example I

½ − $^1/_3$. LCM of 2 and 3 = 6

= 3 − 2
   6

= $^1/_6$

Example II

  1 − ½

= $\frac{2}{2} - \frac{1}{2}$ LCM =2

=   2 − 1
      2

= $\frac{1}{2}$

EXERCISE

1. $^4/_5 - ^1/_5$
2. $^2/_3 - ^1/_5$
3. $1 - ^2/_{10}$

4. $^3/_4 - ^1/_6$
5. $^1/_2 - ^2/_5$
6. $^3/_5 - ^2/_{10}$

LESSON THREE

SUBTRACTION OF MIXED NUMBERS

   Example I

$2^2/_5 - 1^1/_2$

= $2^2/_5 - 1^1/_2$ Change to improper fractions.

= $\frac{12}{5} - \frac{3}{2}$ LCM of 5 and 2 = 10

  $\frac{24 - 15}{10}$

  $\frac{9}{10}$

EXERCISE

1. $3\,^1/_2 - ^2/_3$
2. $1^1/_{10} - ^1/_2$
3. $3\,^2/_3 - ^1/_2$

4. $5^1/_5 - 2^1/_{10}$
5. $3^1/_4 - 2^1/_3$
6. $4^3/_4 - 1^1/_8$

LESSON FOUR

WORD PROBLEMS INVOLVING SUBTRACTION OF FRACTIONS

Example I

A baby was given $^5/_6$ litres of milk and drunk $^7/_{12}$ litres. How much milk remained?

Given – drunk

$= ^5/_6 - ^7/_{12}$ **LCM of 6 and 12 = 12**

$= \dfrac{10 - 7}{12}$

$= ^3/_{12}$. **Reduce to simplest term**.

$= $ **¼ litres**

Example II

2 ½ litres of water were removed from a container of 5 ¼ litres. How much water remained?

Water remaining $= 5\ ¼ - 2\ ½$

$= ^{21}/_4 - ^5/_2$ **LCM of 4 and 2 = 4**

$= \dfrac{21 - 10}{4}$

$= ^{11}/_4$. Change to mixed fraction.

$= $ **2 ¾ litres of water remained**

EXERCISE

1. A girl had a $^1/_2$ glass of water and used $^1/_3$ of it to take the medicine. What fraction of water was left?
2. Musoke was given $^3/_4$ of sugar cane. He gave $^1/_6$ of it to his friend. How much did Musoke remain with?
3. A basket is $^7/_{12}$ full of fruits. If $^3/_{12}$ of them are still green. What fraction of the fruits are ripe?
4. A man had to plant $^7/_8$ of a garden. He planted $^3/_4$ of that in the morning. What fraction was left for planting?
5. A tank is $^5/_6$ full of water, if $^2/_3$ of that water is drawn off. Find the fraction of the water left?

LESSON FIVE

MULTIPLICATION OF FRACTIONS

Example I

¼ x 3

$= $ ¼ x ^{3}

$= \dfrac{1 \times 3}{4}$

$= \underline{\textbf{¾}}$

Example II

21 X $^2/_3$

$= 21$ x $^2/_3$

$= \cancel{21}^7 \times \dfrac{2}{_1\cancel{3}}$

$= \dfrac{2 \times 7}{1}$

$= \underline{\textbf{14}}$

Example III

½ of 16   **'of' means multiplication**

$= $ ½ x 16

$= \dfrac{1 \times \cancel{16}^8}{_1\cancel{2}}$

$= \dfrac{1 \times 8}{1}$

$= \underline{\textbf{8}}$

Example III

$^2/_5$ of 6

$\dfrac{2}{5} \times 6$

$\dfrac{12}{5}$ Change to mixed fraction.

$2\dfrac{2}{5}$

EXERCISE

MULTIPLY:

1. $^1/_3$ x 3

2. $^2/_3$ of 15

3. $2^2/_5$ of 20

4. 6 x $^2/_9$

5. $^2/_5$ x 10

6. $^5/_7$ of 21