BUDO JUNIOR SCHOOL

REMEDIAL WORK 2020 - SET THREE

PRIMARY SIX

MATHEMATICS.

APPLICATION OF FRACTIONS.

Fractional parts of quantities.

Example:

1. What is $\frac{1}{2}$ of 40 apples?

   Solution.

   $=\frac{1}{2}$ of 40 apples.

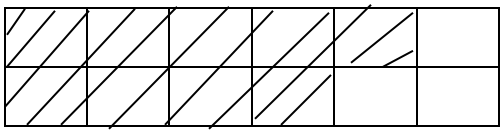
   $=\frac{1}{2}$ x 40 apples.

   $=\frac{1 \times 40}{2}$ apples

   $=\frac{\cancel{40}^{20}}{\cancel{2}_{1}}$ apples

   = 20 apples

2. Shade $\frac{3}{4}$ of the figure below.



   Number of parts to shade.

   $=\frac{3}{4}$ of 12 parts.

   $=\frac{3}{\cancel{4}_{1}} \times \frac{\cancel{12}^{3}}{1}$ parts

   = 3 x 3 parts

   = 9 parts.

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3. Shade $\frac{1}{4}$ of $\frac{2}{3}$ of the figure below.

Number of parts to shade

$= (\frac{1}{4} \text{ of } \frac{2}{3}) \text{ of } 12 \text{ parts} = \frac{1}{\cancel{4}_{2}} \times \frac{\cancel{2}^{1}}{\cancel{3}} \times \cancel{12} \text{ parts} = \frac{1 \times 1 \times 2 \text{ parts}}{1} = 2 \text{ parts}$

4. Find the sum of $\frac{3}{4}$ of 60 and $\frac{2}{3}$ of the same number.

Solution

Method 1

$= (\frac{3}{4} \text{ of } 60) + (\frac{2}{3} \text{ of } 60)$

$= (\frac{3}{\cancel{4}_{1}} \times \cancel{60}^{15}) + (\frac{2}{\cancel{3}_{1}} \times \cancel{60}^{20})$

$= (3 \times 15) + (2 \times 20)$

$= 45 + 40$

$= 4\ 5$

$+ 4\ 0$

$8\ 5$

Method 2

$= (\frac{3}{4} + \frac{2}{3}) \text{ of } 60$

$= (\frac{3}{\cancel{4}_{1}} \times \cancel{12}^{3}) + (\frac{2}{\cancel{3}_{1}} \times \cancel{12}^{4}) \times 60$

$= \frac{(3 \times 3) + (2 \times 4)}{12} \times 60$

$= \frac{(9 + 8)}{12} \times 60$

$= \frac{17}{\cancel{12}_{1}} \times \cancel{60}^{5}$

$= 17 \times 5$

$= 85$

Remaining fractions.

Example.

1. In a class, $\frac{2}{5}$ of the learners are boys and the rest are girls. Find the fraction of girls in the class.

   1 represents the whole class.

   So $1 - \frac{2}{5}$

   $= \frac{1}{1} - \frac{2}{5}$

   $= \frac{5 - 2}{5}$

   $= \frac{3}{5}$

   OR

   $= \frac{5}{5} - \frac{2}{5}$

   $= \frac{5 - 2}{5}$

   $= \frac{3}{5}$

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2. At a party $\frac{1}{4}$ of the guests were men, $\frac{2}{3}$ were women and the rest were children. Find the fraction of children at the party.

Solution.

Fraction for both men and women

$= \frac{1}{4} + \frac{2}{3}$

$= 3 + 8$

$= \frac{11}{12}$

Fraction for children

$= 1 - \frac{11}{12}$

$= \frac{1}{1} - \frac{11}{12}$

$= \frac{12 - 11}{12}$

$= \frac{1}{12}$

More application of fractions.

Example 1

I a class of 90 learners, $\frac{2}{5}$ are boys and the rest are girls. Find the number of girls in the class.

Solution.

Total – 90 learners

Fraction for girls - $\frac{2}{5}$

Fraction of boys

$= 1 - \frac{2}{5}$

$= \frac{5}{5} - \frac{2}{5}$

$= \frac{5-2}{5}$

$= \frac{3}{5}$

Number of boys.

$= \frac{3}{5}$ of 90 boys

$= \frac{3}{\cancel{5}_{1}} \times \cancel{90}^{18}$ boys

= (3 x 18) boys

= 54 boys

Example 2.

A motorist got a puncture after covering $\frac{4}{9}$ of his journey. Find the distance he was left with if his journey was 630km.

Solution:

Total distance – 630km

Fraction covered $\frac{4}{9}$

Remaining fraction

$= 1 - \frac{4}{9}$

$= \frac{9 - 4}{9}$

$= \frac{9}{9} - \frac{4}{9}$

$= \frac{5}{9}$

Remaining distance

$= \frac{5}{\cancel{9}} \times \cancel{630}$ 70 km

= 5 x 70 km

= 350 km

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Example 3

Wassw, Kato and Kizza shared sh. 600,000 altogether. Wasswa got $\frac{2}{5}$ of the money, Kato got $\frac{1}{3}$ of it and Kizza got the rest.

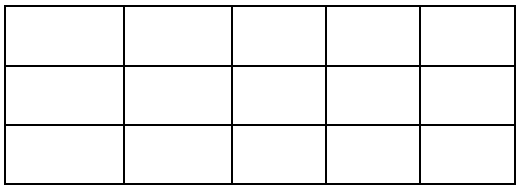
a. Find how much Kizza got.
   Solution.
   Total share – sh. 600,000
   Wasswa's fraction -$\frac{2}{5}$
   Kato's fraction - $\frac{1}{3}$

   Kizza's fractional share.
   $= 1 - (\frac{2}{5} + \frac{1}{3})$ $= \frac{15}{15} - \frac{11}{15}$
   $= \frac{1}{1} - (\frac{6+5}{15})$ $= \frac{15-11}{15}$
   $= \frac{1}{1} - \frac{11}{15}$ $= \frac{4}{15}$

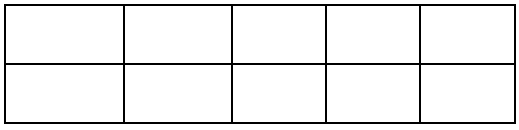
   Kizza's share
   $= \frac{4}{15}$ of sh. 600,000
   $= \frac{4}{15}$ x shs. 40,000
   = 4 x sh. 40,000
   = sh. 160,000
   Kizza got sh. 160,000

Activity:

1. Work out $\frac{2}{3} + \frac{1}{5}$
2. Subtract $\frac{4}{7}$ from 1
3. What is $\frac{3}{5}$ of 45 cows?
4. Shade $\frac{4}{5}$ of the figure below



5. Leave $\frac{2}{3}$ of $\frac{3}{4}$ of the figure below unshaded.



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6. Find the difference between $\frac{3}{4}$ of 80 books and $\frac{2}{5}$ of the same number.
7. In a club of 280 farmers, $\frac{4}{7}$ of them grow bananas and the rest are coffee farmers. Find the number of coffee farmers in the club.
8. Paul, John and Mark shared sh. 960,000. Paul got $\frac{1}{3}$ of the money, John got $\frac{1}{4}$ of the money and Mark got the rest.
   a) Find how much Mark got.
   b) Find how much more Mark got them Joel.

More about application of fractions.

Example.

1. Given that $\frac{2}{3}$ of a number is 24. Find the number.

   Solution:

   Let the number be y

   $\frac{2}{3}$ of a number (y) is 24

   $\frac{2}{3} \times y = 24$

   $\frac{2y}{3} = 24$ (multiply both sides by 3)

   $\frac{2y}{\cancel{3}_{1}} \times \cancel{3}^{1} = 24 \times 3$

   $2 \quad 4$
   $\times \quad 3$
   $7 \quad 2$

   $2y = 72$

   $\frac{\cancel{2}y}{\cancel{2}} = \frac{\cancel{72}}{\cancel{2}}\ 36$

   $Y = 36$

The number is 36

OR

2 parts of te number is 24

1 part of the number is $\frac{\cancel{24}}{\cancel{2}}\ 12$

1 part of the number is 12

3 parts of the number will be 12 x 3

3 parts of the number is 36

The number is 36

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Example 2

Mr. Oluka spends $\frac{7}{11}$ of his salary and saves the rest which is sh. 320,000

Find Mr. Oluka's salary.

Solution.

Total salary - ?

Fraction spent - $\frac{7}{11}$

Fraction saved - ? sh. 320,000

Fraction he saves

$1 - \frac{7}{11} = \frac{11-7}{11}$

$\frac{11}{11} - \frac{7}{11} = \frac{4}{11}$

Let Mr. Oluka's salary be w.

$\frac{4}{11} \times w$ =sh. 320,000

$\frac{4w}{11}$ = sh 320,000

$\frac{4w}{11} \times 11$ = sh. 320,000 × 11

4w = sh. 320,000 x 11

$\frac{4w}{4} = \text{sh. } \frac{320,000}{4} \times 11$

w = sh. 80,000 x 11

w = sh. 880,000

Mr. Oluka's salary is sh. 880,000

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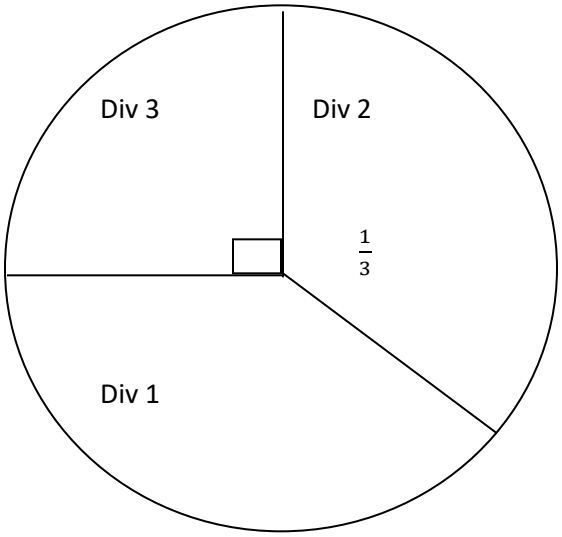
Try this following the guidance given.

The circle graph below shows how learners performed in a certain set of exams.



Note: Division 3 takes $\frac{1}{4}$ of the circle.

a) Find the fraction of learners who scored Division 1.

b) If 35 learners passed in division 1, find the total number of learners in the class.

Activity.

1. Given that $\frac{3}{7}$ of a number is 18. Find the number.

2. In a class, $\frac{5}{9}$ of the learners are girls and the rest are boys. There are 36 boys in the class.

3. Find the total number of learners in the class.

4. Find the number of girls in the class.

5. On Mr. Turyahabwa's farm $\frac{1}{5}$ of the animals are sheep, $\frac{1}{3}$ are goats and the rest are cattle.

   He has 105 head of cattle on the farm.

   a) Find the fraction of cattle on his farm.

   b) Find the total number of animals on Mr. Turyahabwa's farm.

   c) How many sheep are on his farm?

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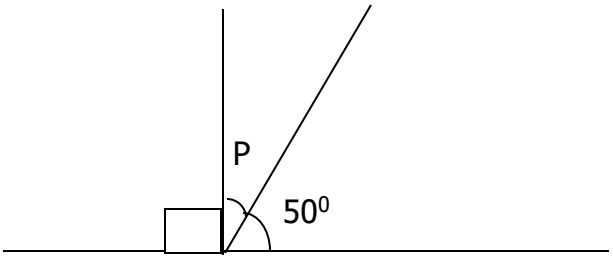
PRACTICE EXERCISE.

Activity 1.

1. Write 40404 in words.
2. Write "Thirty thousand eleven " in numerals.
3. Given the number 4975321
   a) Find the quotient of the value of 9 and the value of 3.
   b) Double the sum of the value of 5 and the place value of 7.
4. Round off 96481 to the nearest hundreds.
5. Collect the sum of 17.893 and 21.025 to one decimal place.
6. Write 196 in Roman numerals.
7. Write CMXLVI in Hindu Arabic numerals.
8. Show 121_{three} on an abacus.
9. Convert 101_{two} to base ten.
10. Write 13_{ten} as a number in base five.

Activity 2

1. Work out 35 x 3
2. Solve for n: 2n – 3 = 5
3. Work out: $\frac{5}{9} \div \frac{2}{3}$
4. Convert $3\frac{1}{3}$ hours to minutes
5. A dice is tossed once, what is the probability that an even number appears on top?
6. Find the area of a square garden of side 12m.
7. Calculate the size of angle p.



8. Find the L.C.M of 9 and 12
9. The cost of 8 pens is sh. 3200. Find the cost of 13 similar pens at the same unit cost.
10. The sum of three consecutive counting numbers is 36. Find the number.

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