BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

CLASS V   SUBJECT- MATHEMATICS   TERM 2 (2020 - 2021)

TOPIC- FRACTIONS

NAME - _____   CLASS V/ SEC _____   WEEK: 15/02/21_19/02/21

LEARNING OUTCOMES: **Each child will be able to:**

* add and subtract at least two given unlike fractions.

* multiply fractions by a whole number

Children, in the last e-lesson we learned addition and subtraction of like fractions. Now, we will learn addition and subtraction of unlike fractions.
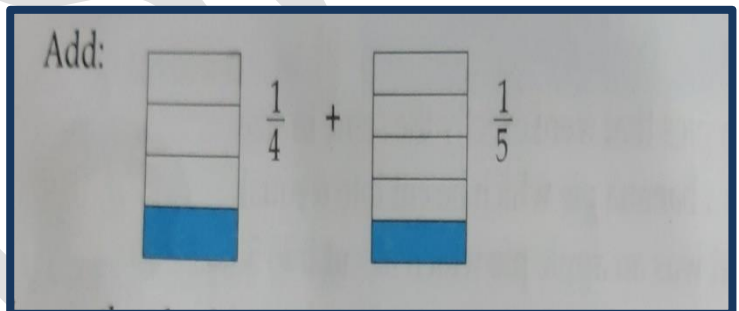
Let's watch the following video for better understanding of the topic.

https://youtu.be/cgRq5yBp6sU

ADDITION AND SUBTRACTION OF UNLIKE FRACTIONS:

Adding unlike fractions:

Observe that the denominators of the

given fractions are not same. But we
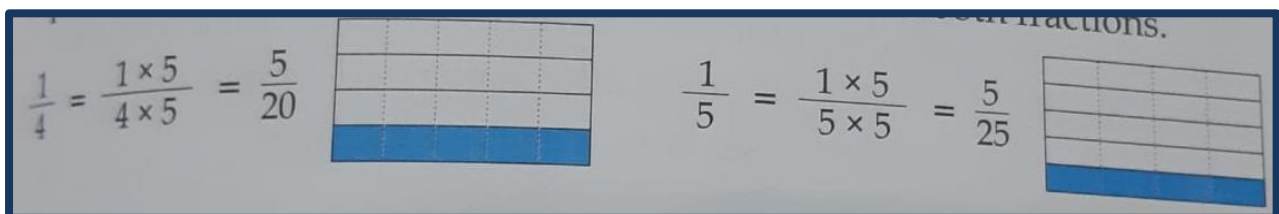
have learnt to add like fractions.

So let us now try to write equivalent

Fractions of the given fraction with the same denominator and then add.

Multiple of 4: 4, 8, 12, 16, 20, 24…………

Multiples of 5: 5, 10, 15, 20, 25…………

20 is the least common multiple of 4 and 5. Therefore we can write equivalent fractions with 20 as the denominators for both fractions.

Add: $\frac{1}{4} + \frac{1}{5}$

$$\frac{1}{4} = \frac{1 \times 5}{4 \times 5} = \frac{5}{20} \qquad \frac{1}{5} = \frac{1 \times 5}{5 \times 5} = \frac{5}{25}$$

Now, they have become fractions with the same denominations. So, we will simply add the numerators, keeping the denominators same.

$$\frac{1}{4} + \frac{1}{5} = \frac{5}{20} + \frac{4}{20} = \frac{9}{20}$$

Let's Try

1. Add the following fractions.

a) $\frac{1}{2} + \frac{1}{3}$ b) $\frac{2}{3} + \frac{4}{5}$ c) $\frac{3}{7} + \frac{2}{6}$

d) $\frac{3}{5} + \frac{1}{6}$ e) $\frac{2}{5} + \frac{3}{5}$ f) $\frac{5}{8} + \frac{1}{4}$
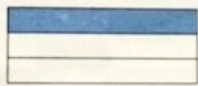
Subtraction of Unlike Fractions:

Let's subtract $\frac{1}{3}$ from $\frac{1}{2}$.

Observe that the denominators of the given fractions are not same. But we have learnt how to subtract like fractions. So let us now try to write equivalent fractions of the given fractions with the same denominator and then subtract.

$$\frac{1}{2} \quad - \quad \frac{1}{3} \quad = \quad ?$$
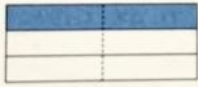
$$\frac{1 \times 3}{2 \times 3} = \frac{3}{6} \qquad \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

$$\frac{3}{6} \quad - \quad \frac{2}{6} \quad = \quad \frac{1}{6}$$

Let's Practise

Find the difference:

a) $\frac{2}{3} - \frac{1}{2} = \square$

b) $\frac{1}{2} - \frac{1}{4} = \square$
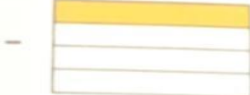
c) $\frac{2}{5} - \frac{1}{4} = \square$

Let's Practise

1. Find the difference:

a) $\frac{4}{5} - \frac{1}{5}$ b) $\frac{1}{3} - \frac{1}{4}$ c) $\frac{4}{5} - \frac{3}{10}$

d) $\frac{2}{5} - \frac{2}{6}$ e) $\frac{1}{3} - \frac{1}{6}$ f) $\frac{1}{4} - \frac{1}{8}$

Children, let's solve some real life situation questions.

Q1. Disha took $\frac{1}{3}$ hours to paint her study table –top and $\frac{1}{2}$ hour to paint a chair. How much time did she take in all?

Q2. In a public transport, the authorities have reserved $\frac{1}{5}$ of the seats for elderly people, $\frac{1}{4}$ of the seats for physically challenged people and $\frac{1}{5}$ of seats for women. What fraction of seats are reserved in all?

Q3. Nandini took $\frac{1}{3}$ of a chocolate bar and Anshu took $\frac{1}{4}$ of the chocolate bar. Who took more and by how much?

Q4. A recipe needs $\frac{2}{5}$ cup of milk and $\frac{1}{3}$ Cup of cream. How much more milk than cream is required in the recipe?

Q5. Mrs Kumar bought 3 litres of milk in the morning. There was $\frac{5}{8}$ litres left in the evening. How much was used during the day?

MULTIPLICAION OF FRACTIONS:

Let's watch the following video for the better understanding of the topic.

https://youtu.be/is4Fa4zqri8

Multiplication of a Whole Number by a Fractions

Multiply:

a $3 \times \frac{1}{2}$ means 3 times $\frac{1}{2}$; can be written as $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} = \frac{3}{2}$

b $2 \times \frac{2}{3}$ means 2 times $\frac{2}{3}$; can be written as $\frac{\square}{\square} + \frac{\square}{\square} = \frac{\square}{\square}$

Let's Try

Find the product.

a $2 \times \frac{3}{4}$ **c** $3 \times \frac{2}{5}$ **e** $3 \times \frac{1}{5}$ **g** $4 \times \frac{2}{3}$

**b** $3 \times \frac{4}{5}$ **d** $4 \times \frac{2}{7}$ **f** $5 \times \frac{2}{7}$ **h** $3 \times \frac{4}{5}$

Fractions

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Fill in the blanks :

(a) A fraction that has 1 as the numerator is called a .... fraction.

(b) Fractions with same denominator are called .... fractions and having different denominators are called .... fractions.

(c) Fractions whose numerator is less than denominator are called .... fractions and with greater numerator than denominator are called .... fractions.

(d) .... numbers consist of a whole number and a proper fraction.

(e) Two or more fractions, representing the same part of a whole are .... fractions.

(f) To compare fractions, the unlike fractions have to be changed to the .... fractions first.

Add the following & write them as 'Improper & mixed fractions':
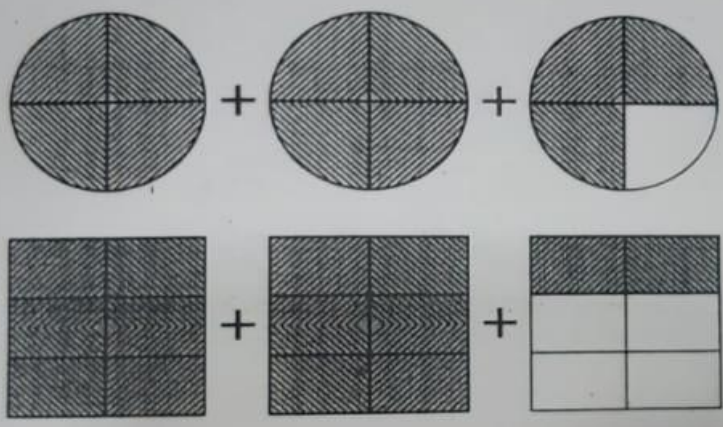
Improper fractions	Mixed fractions

Find the sum:

a) $8\frac{1}{4} + 2\frac{2}{5}$

b) $5\frac{2}{3} + 2\frac{5}{9} + 7$

Find the difference between :

a) 21 and $10\frac{1}{3}$

b) $7\frac{1}{8}$ and $3\frac{3}{4}$