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## Unit 10 - Fractions

## $\checkmark$ Subtraction of fractions

Example 01: |  | $\frac{5}{7}-\frac{2}{7}$ |
| ---: | :--- |
|  | $=\frac{5-2}{7}$ |
|  | $=\frac{3}{7}$ |

$$
\begin{aligned}
& \text { Ex } 03: \frac{7}{8}-\frac{2}{3} \\
& =\frac{7 \times 3}{8 \times 3}-\frac{2 \times 8}{3 \times 8} \\
& =\frac{21}{24}-\frac{16}{24} \\
& =\frac{21-16}{24} \\
& =\frac{5}{24}
\end{aligned}
$$

## $\checkmark$ Subtracting mixed numbers:

Example: $3 \frac{3}{5}-2 \frac{1}{5}$

$$
\begin{aligned}
& \text { Method } I=(3-2)+\left(\frac{3}{5}-\frac{1}{5}\right) \\
& =1+\left(\frac{3-1}{5}\right) \\
& =1+\frac{2}{5} \\
& =1 \frac{2}{5}
\end{aligned}
$$

$$
\begin{aligned}
& \text { Method II } 3 \frac{3}{5}-2 \frac{1}{5} \\
& =\frac{18}{5}-\frac{11}{5} \\
& =\frac{7}{5} \\
& =1 \frac{2}{5}
\end{aligned}
$$

Example 02 : $4 \frac{3}{7}-2 \frac{1}{2}$
$>$ Converting mixed numbers in to improper fractions

$$
\frac{31}{7}-\frac{5}{2}
$$

> Convert to same denominators by equivalent fractions
$\frac{31 \times 2}{7 \times 2}-\frac{5 \times 7}{2 \times 7}$
$>$ Subtraction numerators with same denominators

$$
\frac{62}{14}-\frac{35}{14}
$$

> Converting improper fraction as mixed number

$$
\begin{aligned}
& \frac{62-35}{14} \\
& =\frac{27}{14} \quad=1 \frac{13}{14}
\end{aligned}
$$

## Exercises

## Evaluate the following

(i) $\frac{3}{4}-\frac{1}{4}$
(ii) $\frac{7}{8}-\frac{2}{8}$
(iii) $\frac{11}{13}-\frac{5}{13}$
(iv) $\frac{3}{4}-\frac{2}{3}$
(v) $\frac{17}{15}-\frac{5}{6}$
(vi) $\frac{5}{7}-\frac{2}{5}$
(vii) $3 \frac{2}{7}-2 \frac{1}{7}$
(Viii) $4 \frac{5}{8}-\frac{3}{4}$
(ix) $5 \frac{1}{4}-2 \frac{3}{5}$
(x) $3 \frac{1}{4}-1 \frac{5}{6}$
(xi) $5 \frac{1}{2}-3 \frac{3}{4}$
(xii) $2 \frac{5}{8}-\frac{3}{4}$

Mixed Exercises :

1. Evaluate the following
i $\frac{3}{7}+\frac{2}{7}$
ii $\quad \frac{1}{8}+\frac{5}{8}$
iii $\quad \frac{1}{2}+\frac{1}{4}$
iv $\quad \frac{7}{15}+\frac{2}{5}$
v $\frac{3}{8}+\frac{1}{6}$
vi $\frac{1}{4}+\frac{1}{6}$
vii $\frac{2}{3}+\frac{1}{4}+\frac{1}{6}$
viii $\frac{5}{12}+\frac{3}{8}+\frac{1}{6}$
2. Evaluate the following
i $\quad 1 \frac{2}{3}+2 \frac{1}{5} \quad$ ii $\quad 2 \frac{1}{4}+3 \frac{1}{2} \quad$ iii $\quad 1 \frac{3}{4}+1 \frac{5}{6} \quad$ iv $\quad 2 \frac{2}{3}+3 \frac{1}{4}$
v $\quad 3 \frac{5}{6}+1 \frac{3}{8}$
vi $\quad 2 \frac{4}{9}+1 \frac{5}{6}+\frac{2}{3}$
vii $1 \frac{3}{4}+3 \frac{1}{2}+1 \frac{2}{3}$ viii $\quad 3 \frac{2}{5}+1 \frac{7}{12}$
3. Evaluate the following
i $\frac{3}{5}-\frac{1}{5}$
ii $\frac{4}{7}-\frac{2}{7}$
iii $\frac{3}{5}-\frac{1}{10}$
iv $\quad \frac{5}{8}-\frac{1}{2}$
v $\frac{3}{5}-\frac{1}{2}$
vi $\frac{3}{4}-\frac{5}{12}$
vii $\frac{5}{6}-\frac{3}{8}$
viii $\frac{11}{12}-\frac{5}{8}$
4. Evaluate the following
i $\quad 2 \frac{2}{3}-1 \frac{1}{6}$
ii $\quad 3 \frac{2}{15}-1 \frac{4}{5}$
iii $\quad 4 \frac{3}{5}-1 \frac{1}{2}$
iv $\quad 3 \frac{2}{5}-1 \frac{1}{4}$
v $3 \frac{5}{8}-2 \frac{1}{6}$
vi $5 \frac{1}{6}-3 \frac{5}{9}$

## $\checkmark$ Do the exercises of the text book 10.5 and 10.6

