



Provincial Department Of Education – Sabaragamuwa  
WEEKLY SCHOOL

Subject : Science

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Grade 7

Prepared by- A.N.N.Chandramali Abeyesiri , R/Bal/Udagama M.V.

## Unit 10 – Fractions

When fractions with equal denominators are added, the denominator of the answer is the same as the denominators of the fractions that are added. The numerator of the answer is the sum of the numerators of the fractions that are added.

**Example 1:**  $\frac{3}{7}, \frac{2}{7}$

$$= \frac{5+2}{7}$$

$$= \frac{5}{7}$$

**Example 2:**  $\frac{5}{11}, \frac{3}{11}$

$$= \frac{5+3}{11}$$

$$= \frac{8}{11}$$

- Addition of fractions with unequal denominators

When fraction with unequal denominators are being added, the given fractions needed to be first converted in to equivalent fractions with equal denominators, and then added.

**Example 1:**  $\frac{3}{8}, \frac{1}{4}$

$$= \frac{3}{8} + \frac{1 \times 2}{4 \times 2}$$

$$= \frac{3}{8} + \frac{2}{8}$$

$$= \frac{5}{8}$$

**Example 2:**  $2\frac{2}{3}, \frac{1}{5}$

$$= \frac{2 \times 5}{3 \times 5} + \frac{1 \times 3}{5 \times 3}$$

$$= \frac{10}{15} + \frac{3}{15}$$

$$= \frac{13}{15}$$

- Addition of mixed numbers

### Method i

The whole number part and the fraction part can be added separately

### Method ii

The mixed numbers can be written as improper fraction and added.

**Example 1:**  $2\frac{1}{7} + 1\frac{4}{7}$

**Method I**

$$\begin{aligned} & 2\frac{1}{7} + 1\frac{4}{7} \\ &= (2+1) + \frac{1}{7} + \frac{4}{7} \\ &= 3 + \frac{5}{7} \\ &= 3\frac{5}{7} \end{aligned}$$

**Method ii**

$$\begin{aligned} & 2\frac{1}{7} + 1\frac{4}{7} \\ &= \frac{15}{7} + \frac{11}{7} \\ &= \frac{26}{7} \\ &= 3\frac{5}{7} \end{aligned}$$

**Example 2:**  $2\frac{3}{5} + 3\frac{1}{4}$

**Method I**

$$\begin{aligned} & 2\frac{3}{5} + 3\frac{1}{4} \\ &= (2+3) + \left(\frac{3}{5} + \frac{1}{4}\right) \\ &= 5 + \left(\frac{3 \times 4}{5 \times 4} + \frac{1 \times 5}{4 \times 5}\right) \\ &= 5 + \left(\frac{12}{20} + \frac{5}{20}\right) \\ &= 5 + \frac{12+5}{20} \\ &= 5 + \frac{17}{20} \\ &= 5\frac{17}{20} \end{aligned}$$

**Method ii**

$$\begin{aligned} & 2\frac{3}{5} + 3\frac{1}{4} \\ &= \frac{13}{5} + \frac{13}{4} \\ &= \frac{13 \times 4}{5 \times 4} + \frac{13 \times 5}{4 \times 5} \\ &= \frac{52}{20} + \frac{65}{20} \\ &= \frac{52+65}{20} \\ &= \frac{117}{20} \\ &= 5\frac{17}{20} \end{aligned}$$

### Exercises

**(01) Evaluate the following.**

i)  $\frac{5}{13} + \frac{4}{13}$

ii)  $\frac{8}{15} + \frac{5}{15} + \frac{1}{15}$

iii)  $\frac{5}{9} + \frac{7}{9}$

iv)  $\frac{1}{3} + \frac{2}{9}$

v)  $\frac{3}{4} + \frac{1}{5}$

vi)  $\frac{3}{8} + \frac{5}{12}$

**(02) Evaluate the following**

i)  $3\frac{1}{5} + 2\frac{2}{5}$

ii)  $3\frac{1}{7} + 2\frac{2}{3}$

iii)  $4\frac{1}{2} + 5\frac{2}{3}$

iv)  $3\frac{1}{4} + 1\frac{2}{3} + 2\frac{1}{2}$

v)  $2\frac{3}{4} + \frac{2}{5}$

vi)  $1\frac{5}{6} + 2\frac{3}{4}$

➤ (Do the exercises of the text book 10.3 and 10.4)