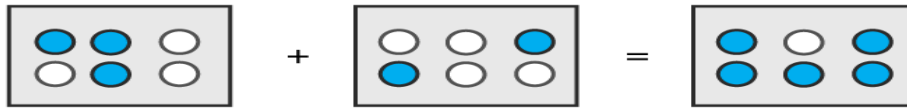


EXERCISE 6.8

1. Write these fractions appropriately as additions or subtractions:



Solution:

(i) It can be written as
 $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

(ii) It can be written as
 $\frac{3}{6} + \frac{2}{6} = \frac{5}{6}$

2. Solve:

- (i) $\frac{5}{12} + \frac{1}{12}$
- (ii) $\frac{3}{15} + \frac{7}{15}$
- (iii) $\frac{3}{22} + \frac{7}{22}$
- (iv) $\frac{1}{4} + \frac{0}{4}$
- (v) $\frac{4}{13} + \frac{2}{13} + \frac{1}{13}$
- (vi) $\frac{0}{15} + \frac{2}{15} + \frac{1}{15}$
- (vii) $\frac{7}{31} - \frac{4}{31} + \frac{9}{31}$
- (viii) $3\frac{2}{7} + \frac{1}{7} - 2\frac{3}{7}$
- (ix) $2\frac{1}{3} - 1\frac{2}{3} + 4\frac{1}{3}$
- (x) $1 - \frac{2}{3} + \frac{7}{3}$
- (xi) $\frac{16}{7} - \frac{5}{7} + \frac{9}{7}$

Solution:

(i) $\frac{5}{12} + \frac{1}{12}$
 It can be written as
 $\frac{5}{12} + \frac{1}{12} = \frac{(5 + 1)}{12}$
 On further calculation
 $\frac{5}{12} + \frac{1}{12} = \frac{6}{12} = \frac{1}{2}$

(ii) $\frac{3}{15} + \frac{7}{15}$
 It can be written as
 $\frac{3}{15} + \frac{7}{15} = \frac{(3 + 7)}{15}$
 On further calculation
 $\frac{3}{15} + \frac{7}{15} = \frac{10}{15} = \frac{2}{3}$

(iii) $\frac{3}{22} + \frac{7}{22}$
 It can be written as
 $\frac{3}{22} + \frac{7}{22} = \frac{(3 + 7)}{22}$
 On further calculation
 $\frac{3}{22} + \frac{7}{22} = \frac{10}{22} = \frac{5}{11}$

(iv) $1/4 + 0/4$

It can be written as

$$1/4 + 0/4 = (1 + 0)/4$$

On further calculation

$$1/4 + 0/4 = 1/4$$

(v) $4/13 + 2/13 + 1/13$

It can be written as

$$4/13 + 2/13 + 1/13 = (4 + 2 + 1)/13$$

On further calculation

$$4/13 + 2/13 + 1/13 = 7/13$$

(vi) $0/15 + 2/15 + 1/15$

It can be written as

$$0/15 + 2/15 + 1/15 = (0 + 2 + 1)/15$$

On further calculation

$$0/15 + 2/15 + 1/15 = 3/15 = 1/5$$

(vii) $7/31 - 4/31 + 9/31$

It can be written as

$$7/31 - 4/31 + 9/31 = (7 - 4 + 9)/31$$

On further calculation

$$7/31 - 4/31 + 9/31 = 12/31$$

(viii) $3\frac{2}{7} + 1/7 - 2\frac{3}{7}$

It can be written as

$$3\frac{2}{7} + 1/7 - 2\frac{3}{7} = (23 + 1 - 17)/7$$

On further calculation

$$3\frac{2}{7} + 1/7 - 2\frac{3}{7} = 7/7 = 1$$

(ix) $2\frac{1}{3} - 1\frac{2}{3} + 4\frac{1}{3}$

It can be written as

$$2\frac{1}{3} - 1\frac{2}{3} + 4\frac{1}{3} = (7 - 5 + 13)/3$$

On further calculation

$$2\frac{1}{3} - 1\frac{2}{3} + 4\frac{1}{3} = 15/3 = 5$$

(x) $1 - 2/3 + 7/3$

It can be written as

$$1 - 2/3 + 7/3 = (3 - 2 + 7)/3$$

On further calculation

$$1 - 2/3 + 7/3 = 8/3$$

(xi) $16/7 - 5/7 + 9/7$

It can be written as

$$16/7 - 5/7 + 9/7 = (16 - 5 + 9)/7$$

On further calculation

$$16/7 - 5/7 + 9/7 = 20/7$$

3. Shikha painted $1/5$ of the wall space in her room. Her brother Ravish helped and painted $3/5$ of the wall space. How much did they paint together? How much the room is left unpainted?

Solution:

Fraction of wall space painted by Shikha = $1/5$

Fraction of wall space painted by Ravish = $3/5$

$$\begin{aligned}\text{So the wall space painted by both} &= 1/5 + 3/5 \\ &= (1+3)/5 \\ &= 4/5\end{aligned}$$

We get the unpainted space = $(5 - 4)/5 = 1/5$

Therefore, Shikha and Ravish painted $4/5$ of the wall space together and the room space left unpainted is $1/5$.

4. Ramesh bought $2\frac{1}{2}$ kg sugar whereas Rohit bought $3\frac{1}{2}$ kg of sugar. Find the total amount of sugar bought by both of them.

Solution:

Sugar bought by Ramesh = $2\frac{1}{2}$ kg

It can be written as

$$\text{Sugar bought by Ramesh} = ((2 \times 2) + 1)/2 = 5/2 \text{ kg}$$

Sugar bought by Rohit = $3\frac{1}{2}$ kg

It can be written as

$$\text{Sugar bought by Rohit} = ((2 \times 3) + 1)/2 = 7/2 \text{ kg}$$

So the total sugar bought by both of them = Sugar bought by Ramesh + Sugar bought by Rohit

By substituting the values

$$\text{Total sugar bought by both of them} = 5/2 + 7/2 = 12/2 = 6\text{kg}$$

Therefore, the total amount of sugar bought by both of them is 6kg.

5. The teacher taught $3/5$ of the book, Vivek revised $1/5$ more on his own. How much does he still have to revise?

Solution:

We know that

Fraction of book teacher taught = $3/5$

Fraction of book Vivek revised = $1/5$

$$\begin{aligned}\text{So the fraction of book Vivek still have to revise} &= 3/5 - 1/5 \\ &= (3 - 1)/5 \\ &= 2/5\end{aligned}$$

Hence, Vivek still have to revise $2/5$ of the book.

6. Amit was given $5/7$ of a bucket of oranges. What fraction of oranges was left in the basket?

Solution:

We know that

Fraction of oranges Amit has = $5/7$

$$\begin{aligned}\text{So the fraction of oranges left in the basket} &= 1 - 5/7 \\ &= (7 - 5)/7 \\ &= 2/7\end{aligned}$$

Hence, the fraction of oranges left in the basket is $2/7$.

7. Fill in the missing fractions:

(i) $7/10 - \square = 3/10$

(ii) $\square - 3/21 = 5/21$

(iii) $\square - 3/6 = 3/6$

(iv) $\square - 5/27 = 12/27$

Solution:

(i) $7/10 - \square = 3/10$

It can be written as

$$7/10 - 3/10 = \square$$

We get

$$(7 - 3)/10 = 2/5$$

(ii) $\square - 3/21 = 5/21$

It can be written as

$$\square = 5/21 + 3/21$$

We get

$$(5 + 3)/21 = 8/21$$

(iii) $\square - 3/6 = 3/6$

It can be written as

$$\square = 3/6 + 3/6$$

We get

$$(3 + 3)/6 = 6/6 = 1$$

(iv) $\square - 5/27 = 12/27$

It can be written as

$$\square = 12/27 + 5/27$$

We get

$$(12 + 5)/27 = 17/27$$