Chapter 5: Fractions

PROBLEM SET 17 [PAGE 23]

Problem Set 17 | Q 1.1 | Page 23

Write the proper number in the box.

$$\frac{1}{2} = \frac{\square}{20}$$

SOLUTION

Here 20 = 2×10

$$\therefore \frac{1}{2} = \frac{1 \times 10}{2 \times 10} = \frac{10}{20}$$

Problem Set 17 | Q 1.2 | Page 23

Write the proper number in the box.

$$\frac{3}{4} = \frac{15}{\square}$$

SOLUTION

Here 15 = 3 x 5

$$\therefore \frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20}$$

Problem Set 17 | Q 1.3 | Page 23

Write the proper number in the box.

$$\frac{9}{11} = \frac{18}{\square}$$

SOLUTION

Here 18 = 9 x 2

hence $\frac{9}{11} = \frac{9 \times 2}{11 \times 2} = \frac{18}{22}$

Problem Set 17 | Q 1.4 | Page 23

Write the proper number in the box.

$$\frac{10}{40} = \frac{\square}{8}$$

SOLUTION

Here 40 + 5 = 8,

hence, $\frac{10}{40} = \frac{10+5}{40+5} = \frac{2}{8}$

Problem Set 17 | Q 1.5 | Page 23

Write the proper number in the box.

$$\frac{14}{26} = \frac{\square}{13}$$

SOLUTION

Here 26 + 2 = 13,

hence, $\frac{14}{26} = \frac{14+2}{26+2} = \frac{7}{13}$

Problem Set 17 | Q 1.6 | Page 23

Write the proper number in the box.

$$\frac{\square}{3} = \frac{4}{6}$$

SOLUTION

Here 6 + 2 = 3,

hence, $\frac{4+4}{6+2} = \frac{2}{3}$

Problem Set 17 | Q 1.7 | Page 23

Write the proper number in the box.

$$\frac{1}{\square} = \frac{4}{20}$$

SOLUTION

Here 4 + 4 = 1,

hence, $\frac{4}{20} = \frac{4+4}{20+4} = \frac{1}{5}$

Problem Set 17 | Q 1.8 | Page 23

Write the proper number in the box.

$$\frac{\square}{5} = \frac{10}{25}$$

SOLUTION

Here 25 + 5 = 5

hence, $\frac{10}{25} = \frac{10+5}{25+5} = \frac{2}{5}$

Problem Set 17 | Q 2.1 | Page 23

Find an equivalent fraction with denominator 18, for the following fraction.

1/2

SOLUTION

$$\frac{1}{2} = \frac{1 \times 9}{2 \times 9} = \frac{9}{18}$$

Problem Set 17 | Q 2.2 | Page 23

Find an equivalent fraction with denominator 18, for the following fraction.

2/3

SOLUTION

$$\frac{2}{3} = \frac{2 \times 6}{3 \times 6} = \frac{12}{18}$$

Problem Set 17 | Q 2.3 | Page 23

Find an equivalent fraction with denominator 18, for the following fraction.
4/6

SOLUTION

$$\frac{4}{6} = \frac{4 \times 3}{6 \times 3} = \frac{12}{18}$$

Problem Set 17 | Q 2.4 | Page 23

Find an equivalent fraction with denominator 18, for the following fraction.
2/9

SOLUTION

$$\frac{2}{9} = \frac{2 \times 2}{9 \times 2} = \frac{4}{18}$$

Problem Set 17 | Q 2.5 | Page 23

Find an equivalent fraction with denominator 18, for the following fraction.
7/9

SOLUTION

$$\frac{7}{9} = \frac{7 \times 2}{9 \times 2} = \frac{14}{18}$$

Problem Set 17 | Q 2.6 | Page 23

Find an equivalent fraction with denominator 18, for the following fraction.
5/3

SOLUTION

$$\frac{5}{3} = \frac{5 \times 6}{3 \times 6} = \frac{30}{18}$$

Problem Set 17 | Q 3.1 | Page 23

Find an equivalent fraction with denominator 5, for the following fraction.
6/15

SOLUTION

$$\frac{6}{15} = \frac{\square}{5}$$

15+3 = 5 Hence $\frac{6}{15} = \frac{6 \div 3}{15 \div 3} = \frac{2}{5}$

Problem Set 17 | Q 3.2 | Page 23
Find an equivalent fraction with denominator 5, for the following fraction.
10/25

SOLUTION

$$\frac{10}{25} = \frac{\square}{5}$$

25+5 =5, Hence $\frac{10}{25} = \frac{10 + 5}{25 + 5} = \frac{2}{5}$

Problem Set 17 | Q 3.3 | Page 23

Find an equivalent fraction with denominator 5, for the following fraction.
12/30

SOLUTION

$$\frac{12}{30} = \frac{\square}{5}$$

30+6 = 5 Hence $\frac{12}{30} = \frac{12 + 6}{30 + 6} = \frac{2}{5}$

Problem Set 17 | Q 3.4 | Page 23

Find an equivalent fraction with denominator 5, for the following fraction.

6/10

SOLUTION

$$\frac{6}{10} = \frac{\square}{5}$$

10+2=5, Hence, $\frac{6}{10} = \frac{6+2}{10+2} = \frac{3}{5}$

Problem Set 17 | Q 3.5 | Page 23

Find an equivalent fraction with denominator 5, for the following fraction.
21/35

SOLUTION

$$\frac{21}{35} = \frac{\square}{5}$$

35+7 = 5,

Hence, $\frac{21}{35} = \frac{21+7}{35+7} = \frac{3}{5}$

Problem Set 17 | Q 4 | Page 23

From the fraction given below, pair off the equivalent fraction.

$$\frac{2}{3}, \frac{5}{7}, \frac{5}{11}, \frac{7}{9}, \frac{14}{18}, \frac{15}{33}, \frac{18}{27}, \frac{10}{14}$$

SOLUTION

$$\frac{2}{3} = \frac{18}{27}; \frac{5}{7} = \frac{10}{14}; \frac{5}{11} = \frac{15}{33}; \frac{7}{9} = \frac{14}{18}$$

Problem Set 17 | Q 5.1 | Page 23

Find two equivalent fraction for the following fraction.
7/9

SOLUTION

$$\frac{7}{9}=\frac{7\times 2}{9\times 2}=\frac{14}{18},\frac{7}{9}=\frac{7\times 4}{9\times 4}=\frac{28}{36}$$

Problem Set 17 | Q 5.2 | Page 23

Find two equivalent fraction for the following fraction.

4/5

SOLUTION

$$\frac{4}{5}=\frac{4\times 3}{5\times 3}=\frac{12}{15}\frac{4}{5}=\frac{4\times 5}{5\times 5}=\frac{20}{25}$$

Problem Set 17 | Q 5.3 | Page 23

Find two equivalent fraction for the following fraction.

3/11

SOLUTION

$$\frac{3}{11}=\frac{3\times 8}{11\times 8}=\frac{24}{88},\frac{3}{11}=\frac{3\times 3}{11\times 3}=\frac{9}{33}$$

PROBLEM SET 18 [PAGE 24]

Problem Set 18 | Q 1 | Page 24

Convert the given fraction into a like fraction.

$\frac{3}{4},\frac{5}{8}$

SOLUTION

8 is the multiple of 4

So, make 8, the common denominator

$$\frac{3}{4}=\frac{3\times 2}{4\times 2}=\frac{6}{8},$$

Thus $\frac{6}{8}$ and $\frac{5}{8}$ are the required like fractions.

Problem Set 18 | Q 2 | Page 24

Convert the given fraction into a like fraction.

$\frac{3}{5}, \frac{3}{7}$

SOLUTION

The number 35 is a multiple of both 5 and 7

So, making 35 as the common denominator

$$\frac{3}{5} = \frac{3 \times 7}{5 \times 7} = \frac{21}{35}, \frac{3}{7} = \frac{3 \times 5}{7 \times 5} = \frac{15}{35}$$

Therefore, $\frac{21}{35}$ and $\frac{15}{35}$ are required like fractions.

Problem Set 18 | Q 3 | Page 24

Convert the given fraction into like fraction.

$\frac{4}{5}, \frac{3}{10}$

SOLUTION

Here 10 is the multiples of 5. So make 10 as the common denominator

$$\frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10}$$

Thus $\frac{8}{10}$ and $\frac{3}{10}$ are required like fractions.

Problem Set 18 | Q 4 | Page 24

Convert the given fraction into a like fraction.

$\frac{2}{9}, \frac{1}{6}$

SOLUTION

The least common multiple of 9 and 6 is 18. So, make 18 as the common denominator.

$$\frac{2}{9} = \frac{2 \times 2}{9 \times 2} = \frac{4}{18}, \frac{1}{6} = \frac{1 \times 3}{6 \times 3} = \frac{3}{18}$$

Thus $\frac{4}{18}$ and $\frac{3}{18}$ are the required like fractions.

Problem Set 18 | Q 5 | Page 24

Convert the given fraction into a like a fraction.

$\frac{1}{4}, \frac{2}{3}$

SOLUTION

Least common multiple of 4 and 3 is 12 So, make 12 as common denominator

$$\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}, \frac{2}{3} = \frac{2 \times 4}{3 \times 4} = \frac{8}{12}$$

So, $\frac{25}{30}, \frac{24}{30}$ are required like fractions.

Problem Set 18 | Q 6 | Page 24

Convert the given fraction into a like fraction.

$\frac{5}{6}, \frac{4}{5}$

SOLUTION

The least common multiple of 6 and 5 is 30 So, make 30 as the common denominator

$$\frac{5}{6} = \frac{5 \times 5}{6 \times 5} - \frac{25}{30}, \frac{4}{5} - \frac{4 \times 6}{5 \times 6} = \frac{24}{30}$$

So, $\frac{25}{30}, \frac{24}{30}$ are required like fractions.

Problem Set 18 | Q 7 | Page 24

Convert the given fraction into a like fraction.

$\frac{3}{8}, \frac{1}{6}$

SOLUTION

The least common multiple of 8 and 6 is 24 So, make 24 as the common denominator.

$$\frac{3}{8} = \frac{3 \times 3}{8 \times 3} = \frac{9}{24}, \frac{1}{6} = \frac{1 \times 4}{6 \times 4} = \frac{4}{24}$$

So, $\frac{9}{24}, \frac{4}{24}$ are required like fractions.

Problem Set 18 | Q 8 | Page 24

Convert the given fraction into a like fraction.

$\frac{1}{6}, \frac{4}{9}$

SOLUTION

The least common multiple of 6 and 9 is 18 So, make 18 as the common denominator

$$\frac{1}{6} = \frac{1 \times 3}{6 \times 3} = \frac{3}{18}, \frac{4}{9} = \frac{4 \times 2}{9 \times 2} = \frac{8}{18}$$

So, $\frac{3}{18}$ and $\frac{8}{18}$ are the required like fractions.

PROBLEM SET 19 [PAGE 26]

Problem Set 19 | Q 1 | Page 26

Write the proper symbol from < , > , or = in the box.

$\frac{3}{7} \square \frac{3}{7}$

SOLUTION

$$\frac{3}{7} = \frac{3}{7}$$

Problem Set 19 | Q 2 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{3}{8} \square \frac{2}{8}$$

SOLUTION

$$\frac{3}{8} > \frac{2}{8}$$

Problem Set 19 | Q 3 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{2}{11} \square \frac{10}{11}$$

SOLUTION

$$\frac{2}{11} < \frac{10}{11}$$

Problem Set 19 | Q 4 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{5}{15} \square \frac{10}{30}$$

SOLUTION

$$\frac{5}{15} = \frac{10}{30}$$

Problem Set 19 | Q 5 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{5}{8} \square \frac{5}{9}$$

SOLUTION

$$\frac{5}{8} > \frac{5}{9}$$

Problem Set 19 | Q 6 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{4}{7} \square \frac{4}{11}$$

SOLUTION

$$\frac{4}{7} > \frac{4}{11}$$

Problem Set 19 | Q 7 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{10}{11} \square \frac{10}{13}$$

SOLUTION

$$\frac{10}{11} > \frac{10}{13}$$

Problem Set 19 | Q 8 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{1}{5} \square \frac{1}{9}$$

SOLUTION

$$\frac{1}{5} > \frac{1}{9}$$

Problem Set 19 | Q 9 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{5}{6} \square \frac{1}{8}$$

SOLUTION

$\frac{5}{6} \square \frac{1}{8}$ converting into like fractions.

$$\frac{5}{6} = \frac{5 \times 4}{6 \times 4} = \frac{20}{24}, \frac{1}{8} = \frac{1 \times 3}{8 \times 3} = \frac{3}{24}, \frac{20}{24} > \frac{3}{24}$$

so, $\frac{5}{6} > \frac{1}{8}$

Problem Set 19 | Q 10 | Page 26

Write the proper symbol from < , > , or = in the box.

`5/12 square 1/6`

SOLUTION

$$\frac{5}{12} \square \frac{1}{6}$$

$$\frac{1}{6} = \frac{1 \times 6}{6 \times 2} = \frac{2}{12}$$

Now, $\frac{5}{12} > \frac{2}{12}$

so, $\frac{5}{12} > \frac{1}{6}$

Problem Set 19 | Q 11 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{7}{8} \square \frac{14}{16}$$

SOLUTION

$$\frac{7}{8} = \frac{7 \times 2}{8 \times 2} = \frac{14}{16}$$

Now, $\frac{14}{16} = \frac{14}{16}$

So, $\frac{7}{8} = \frac{14}{16}$

Problem Set 19 | Q 12 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{4}{9} \square \frac{4}{9}$$

SOLUTION

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

Problem Set 19 | Q 13 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{5}{18} \square \frac{1}{9}$$

SOLUTION

$$\frac{5}{18} \square \frac{1}{9}$$

Now, $\frac{1}{9} = \frac{1 \times 2}{9 \times 2} = \frac{2}{18}$

so, $\frac{5}{18} > \frac{1}{9}$

Problem Set 19 | Q 14 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{2}{3} \square \frac{4}{7}$$

SOLUTION

$$\frac{2}{3} \square \frac{4}{7}$$

$$\frac{2}{3} = \frac{2 \times 7}{3 \times 7} = \frac{14}{21}, \frac{4}{7} = \frac{4 \times 3}{7 \times 3} = \frac{12}{21}$$

Since , $\frac{14}{21} > \frac{12}{21}$

so, $\frac{2}{3} > \frac{4}{7}$

Problem Set 19 | Q 15 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{3}{7} \square \frac{5}{9}$$

SOLUTION

$$\frac{3}{7} \square \frac{5}{9}$$

$$\frac{3}{7} = \frac{3 \times 9}{7 \times 9} = \frac{27}{63} \text{ and } \frac{5}{9} = \frac{5 \times 7}{9 \times 7} = \frac{35}{63}$$

since $\frac{27}{63} < \frac{35}{63}$

so, $\frac{3}{7} < \frac{5}{9}$

Problem Set 19 | Q 16 | Page 26

Write the proper symbol from < , > , or = in the box.

$$\frac{4}{11} \square \frac{1}{5}$$

SOLUTION

$$\frac{4}{11} \square \frac{1}{5}$$

$$\frac{4}{11} = \frac{4 \times 5}{11 \times 5} = \frac{20}{55} \text{ and } \frac{1}{5} = \frac{1 \times 11}{5 \times 11} = \frac{11}{55}$$

since, $\frac{20}{55} > \frac{11}{55} so, \frac{4}{11} > \frac{1}{5}$

PROBLEM SET 20 [PAGE 27]

Problem Set 20 | Q 1.1 | Page 27

Add:

$$\frac{1}{5} + \frac{3}{5}$$

SOLUTION

$$\frac{1}{5} + \frac{3}{5}$$

$$\frac{1}{5} + \frac{3}{5} = \frac{1+3}{5} = \frac{4}{5}$$

Problem Set 20 | Q 1.2 | Page 27

Add:

$$\frac{2}{7} + \frac{4}{7}$$

SOLUTION

$$\frac{2}{7}+\frac{4}{7}=\frac{2+4}{7}=\frac{6}{7}$$

Problem Set 20 | Q 1.3 | Page 27

Add:

$$\frac{7}{12}+\frac{2}{12}$$

SOLUTION

$$\frac{7}{12}+\frac{2}{12}=\frac{7+2}{12}=\frac{9}{12}$$

Problem Set 20 | Q 1.4 | Page 27

Add:

$$\frac{2}{9}+\frac{7}{9}$$

SOLUTION

$$\frac{2}{9}+\frac{7}{9}=\frac{2+7}{9}=\frac{9}{9}=1$$

Problem Set 20 | Q 1.5 | Page 27

Add:

$$\frac{3}{15}+\frac{4}{15}$$

SOLUTION

$$\frac{3}{15}+\frac{4}{15}=\frac{3+4}{15}=\frac{7}{15}$$

Problem Set 20 | Q 1.6 | Page 27

Add:

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

SOLUTION

$$\frac{2}{7}+\frac{1}{7}+\frac{3}{7}=\frac{2+1+3}{7}=\frac{6}{7}$$

Problem Set 20 | Q 1.7 | Page 27

Add:

$$\frac{2}{10}+\frac{4}{10}+\frac{3}{7}$$

SOLUTION

$$\frac{2}{10}+\frac{4}{10}+\frac{3}{10}=\frac{2+4+3}{10}=\frac{9}{10}$$

Problem Set 20 | Q 1.8 | Page 27

Add:

$$\frac{4}{9}+\frac{1}{9}$$

SOLUTION

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

Problem Set 20 | Q 1.9 | Page 27

Add:

$$\frac{5}{8}+\frac{3}{8}$$

SOLUTION

$$\frac{5}{8}+\frac{3}{8}=\frac{5+3}{8}=\frac{8}{8}=1$$

Problem Set 20 | Q 2 | Page 27

Mother gave $\frac{3}{8}$ of one guava to Meena and $\frac{2}{8}$ of the guava to Geeta. What part of the guava did she give them altogether?

SOLUTION

$\frac{3}{8}+\frac{2}{8}=\frac{3+2}{8}=\frac{5}{8}$ given altogether

$\frac{5}{8}$ part of guava given altogether

Problem Set 20 | Q 3 | Page 27

The girls of Std V cleaned 3/4 of a field while the boys cleaned 1/4. What part of the field was cleaned altogether?

SOLUTION

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

Full whole field cleaned altogether.

PROBLEM SET 21 [PAGE 28]

Problem Set 21 | Q 1.1 | Page 28

Subtract:

$\frac{5}{7}-\frac{1}{7}$

SOLUTION

$$\frac{5}{7}-\frac{1}{7}=\frac{5-1}{7}=\frac{4}{7}$$

Problem Set 21 | Q 1.2 | Page 28

Subtract:

$$\frac{5}{8}-\frac{3}{8}$$

SOLUTION

$$\frac{5}{8}-\frac{3}{8}=\frac{5-3}{8}=\frac{2}{8}$$

Problem Set 21 | Q 1.3 | Page 28

Subtract:

$$\frac{7}{9}-\frac{2}{9}$$

SOLUTION

$$\frac{7}{9}-\frac{2}{9}=\frac{7-2}{9}=\frac{5}{9}$$

Problem Set 21 | Q 1.4 | Page 28

Subtract:

$$\frac{8}{11}-\frac{5}{11}$$

SOLUTION

$$\frac{8}{11}-\frac{5}{11}=\frac{8-5}{11}=\frac{3}{11}$$

Problem Set 21 | Q 1.5 | Page 28

Subtract :

$$\frac{9}{13}-\frac{4}{13}$$

SOLUTION

$$\frac{9}{13} - \frac{4}{13} = \frac{9-4}{13} = \frac{5}{13}$$

Problem Set 21 | Q 1.6 | Page 28

Subtract:

$$\frac{7}{10} - \frac{3}{10}$$

SOLUTION

$$\frac{7}{10} - \frac{3}{10} = \frac{7-3}{10} = \frac{4}{10}$$

Problem Set 21 | Q 1.7 | Page 28

Subtract:

$$\frac{9}{12} - \frac{2}{12}$$

SOLUTION

$$\frac{9}{12} - \frac{2}{12} = \frac{9-2}{12} = \frac{7}{12}$$

Problem Set 21 | Q 1.8 | Page 28

Subtract:

$$\frac{10}{15} - \frac{3}{15}$$

SOLUTION

$$\frac{10}{15} - \frac{3}{15} = \frac{10-3}{15} = \frac{7}{15}$$

Problem Set 21 | Q 2 | Page 28

7/10 of a wall is to be painted. Ramu has painted 4/10 of it. How much more needs to be painted?

SOLUTION

To be painted - painted

$$\frac{7}{10} - \frac{4}{10} = \frac{7-4}{10} = \frac{3}{10}$$

$\frac{3}{10}$ more needs to be painted.

PROBLEM SET 22 [PAGE 29]

Problem Set 22 | Q 1.1 | Page 29

Add:

$$\frac{1}{8} + \frac{3}{4}$$

SOLUTION

Smallest common multiple of 4 and 8 is 8. So making 8 is the common denominator of the given fractions.

$$\frac{1}{8} + \frac{3 \times 2}{4 \times 2} = \frac{1}{8} + \frac{6}{8} = \frac{1+6}{8} = \frac{7}{8}$$

Problem Set 22 | Q 1.2 | Page 29

Add:

$$\frac{2}{21} + \frac{3}{7}$$

SOLUTION

21 is the multiple of 7.

so making 21 as denominator of both the fractions.

$$\frac{2}{21}+\frac{3\times 3}{7\times 3}=\frac{2}{21}+\frac{9}{21}$$

$$=\frac{2+9}{21}=\frac{11}{21}$$

Problem Set 22 | Q 1.3 | Page 29

Add:

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

SOLUTION

Least common multiple of 5 and 3 is 15.

So making common denominator of both the fractions 15

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

$$=\frac{6}{15}+\frac{5}{15}$$

$$=\frac{6+5}{15}=\frac{11}{15}$$

Problem Set 22 | Q 1.4 | Page 29

Add:

$$\frac{2}{7}+\frac{1}{2}$$

SOLUTION

Smallest common multiple of 2 and 7 is 14. so, making denominator of both the fractions 14.

$$\frac{2}{7}+\frac{1}{2}=\frac{2\times 2}{7\times 2}+\frac{1\times 7}{2\times 7}$$
$$=\frac{4}{14}+\frac{7}{14}$$
$$=\frac{4+7}{14}=\frac{11}{14}$$

Problem Set 22 | Q 1.5 | Page 29

Add:

$$\frac{3}{9}+\frac{3}{5}$$

SOLUTION

Smallest common multiple of 9 and 5 is 45

$$\frac{3}{9}+\frac{3}{5}=\frac{3\times 5}{9\times 5}+\frac{3\times 9}{5\times 9}$$
$$=\frac{15}{45}+\frac{27}{45}$$
$$=\frac{15+27}{45}=\frac{42}{45}$$

Problem Set 22 | Q 2.1 | Page 29

Subtract:

$$\frac{3}{10}-\frac{1}{20}$$

SOLUTION

20 is the multiple of 10.

SO, $\frac{3}{10}-\frac{1}{20}=\frac{3\times 2}{10\times 2}-\frac{1}{20}$

$$=\frac{6}{20}-\frac{1}{20}$$

$$= \frac{6-1}{20} = \frac{5}{20}$$

Problem Set 22 | Q 2.2 | Page 29

Subtract:

$$\frac{3}{4} - \frac{1}{2}$$

SOLUTION

4 is the multiple of 2.

So, $\frac{3}{4} - \frac{1}{2} = \frac{3}{4} - \frac{1 \times 2}{2 \times 2}$

$= \frac{3}{4} - \frac{2}{4}$

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

$\frac{1}{4}$

Problem Set 22 | Q 2.3 | Page 29

Subtract:

$$\frac{6}{14} - \frac{2}{7}$$

SOLUTION

14 is the multiples of 7.

So, $\frac{6}{14} - \frac{2}{7} = \frac{6}{14} - \frac{2 \times 2}{7 \times 2}$

$= \frac{6}{14} - \frac{4}{14}$

$$= \frac{6-4}{14} = \frac{2}{14}$$

$$= \frac{2}{14}$$

Problem Set 22 | Q 2.4 | Page 29

Subtract:

$$\frac{4}{6} - \frac{3}{5}$$

SOLUTION

Smallest common multiple of 6 and 5 is 30.

$$\frac{4}{5} - \frac{3}{5} = \frac{4 \times 5}{6 \times 5} - \frac{3 \times 6}{5 \times 6}$$

$$= \frac{20}{30} - \frac{18}{30}$$

$$= \frac{20-18}{30} = \frac{2}{30}$$

$$= \frac{2}{30}$$

Problem Set 22 | Q 2.5 | Page 29

Subtract:

$$\frac{2}{7} - \frac{1}{4}$$

SOLUTION

Smallest common multiple of 7 and 4 is 28.

$$\frac{2}{7} - \frac{1}{4} = \frac{2 \times 4}{7 \times 4} - \frac{1 \times 7}{4 \times 7}$$

$$= \frac{8}{28} - \frac{7}{28}$$

$$= \frac{8-7}{28} = \frac{1}{28}$$

PROBLEM SET 23 [PAGE 31]

Problem Set 23 | Q 1.1 | Page 31

What is $\frac{1}{3}$ of the collection given below?

15 pencils

SOLUTION

15 pencils → $\frac{1}{3}$ of 15 = 15, 15 ÷ 3 = 5 pencils.

Problem Set 23 | Q 1.2 | Page 31

What is $\frac{1}{3}$ of the collection given below?

21 balloons

SOLUTION

21 balloons → $\frac{1}{3}$ of 21 = 7, 21 ÷ 3 =7 balloons.

Problem Set 23 | Q 1.3 | Page 31

What is $\frac{1}{3}$ of the collection given below?

9 children

SOLUTION

9 children → $\frac{1}{3}$ of 9 = 3, 9 ÷ 3 = 3 children

Problem Set 23 | Q 1.4 | Page 31

What is $\frac{1}{3}$ of the collection given below?

18 books

SOLUTION

18 books → $\frac{1}{3}$ of 18 = 6, 18 ÷ 3 = 6 books

Problem Set 23 | Q 2.1 | Page 31

What is $\frac{1}{5}$ of the following?

20 rupees

SOLUTION

20 rupees → $\frac{1}{5}$ of 20 = 4, 20 ÷ 5 = 4 rupees.

Problem Set 23 | Q 2.2 | Page 31

What is $\frac{1}{5}$ of the following?

30 km

SOLUTION

30 km → $\frac{1}{5}$ of 30 = 6 , 30 ÷ 5 = 6 km

Problem Set 23 | Q 2.3 | Page 31

What is $\frac{1}{5}$ of the following?

15 liters

SOLUTION

15 liters → $\frac{1}{5}$ of 15= 3, 15 ÷ 5= 3 liters

Problem Set 23 | Q 2.4 | Page 31

What is $\frac{1}{5}$ of the following?

25 cm

SOLUTION

25 cm → $\frac{1}{5}$ of 25 = 5, 25 ÷ 5 = 5cm

Problem Set 23 | Q 3.1 | Page 31

Find the part of the following number equal to the given fraction.

$\frac{2}{3}$ of 30

SOLUTION

$\frac{2}{3} \times 30$

So, we take $\frac{1}{3}$ of 30, twice

$\frac{1}{3} \times 30 = 10$

twice of 10 is 2 x 10 = 20

It means that $\frac{2}{3}$ x 30 = 20

Problem Set 23 | Q 3.2 | Page 31

Find the part of the following number equal to the given fraction.

$\frac{7}{11}$ of 22

SOLUTION

$\frac{7}{11} \times 22$

So, we take $\frac{1}{11}$ of 22, 7 times

$\frac{1}{11} \times 22 = 2$ seven times of 2 is 2 x 7 = 14

Problem Set 23 | Q 3.3 | Page 31

Find the part of the following numbers equal to the given fraction.

$\frac{3}{8}$ of 64

SOLUTION

$\frac{3}{8}$ x 64 So, we take $\frac{1}{8}$ of 64, thrice

$\frac{1}{8} \times 64 = 8$

3 times 8 is 3 x 8 = 24

Problem Set 23 | Q 3.4 | Page 31

Find the part of the following number equal to the given fraction.

$\frac{5}{13}$ of 65

SOLUTION

$\frac{5}{13}$ x 65 So, we take 1/13 of 65, 5 times

$\frac{1}{13} \times 65 = 5$

5 times of 5 is 5 x 5 = 25