Q7

Answer :

(c) $\frac{-13}{60}$

Using the commutative and associative laws, we can arrange the terms in any suitable manner. Using this rearrangement property, we have:

$$\frac{2}{3} + \frac{-4}{5} + \frac{7}{15} + \frac{-11}{20} = \left(\frac{2}{3} + \frac{7}{15}\right) + \left(\frac{-4}{5} + \frac{-11}{20}\right)$$

$$= \frac{(10+7)}{15} + \frac{[(-16)+(-11)]}{20}$$

$$= \left(\frac{17}{15} + \frac{-27}{20}\right)$$

$$= \frac{[68+(-81)]}{60}$$

$$= \frac{-13}{60}$$

Q8

Answer :

(b) $\frac{11}{3}$

Let the other number be x.

Now,

$$x + (-5) = \frac{-4}{3}$$

$$\Rightarrow x = \frac{-4}{3} + (\text{Additive inverse of } -5)$$

$$\Rightarrow x = \frac{-4}{3} + 5$$

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

$$= \frac{(-4)+15}{3}$$

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

Q9

Answer :

(c) $\frac{1}{21}$

Let the required number be x.

Now,

$$\frac{-5}{7} + x = \frac{-2}{3}$$

$$\Rightarrow x = \frac{-2}{3} + \left(\text{Additive inverse of } \frac{-5}{7}\right)$$

$$\Rightarrow x = \left(\frac{-2}{3} + \frac{5}{7}\right)$$

$$= \frac{(-14)+15}{21}$$

$$= \frac{1}{21}$$

Q10

Answer :

(d) $\frac{-5}{2}$

Let the required number be x.

Now,

$$\frac{-5}{3} - x = \frac{5}{6}$$

$$\Rightarrow x = \left(\frac{-5}{3} - \frac{5}{6}\right)$$

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

$$= \frac{-15}{6}$$

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

Thus, the required number is $\frac{-5}{2}$

Q11

Answer :

(b) $\frac{-7}{3}$

$$\left(-\frac{3}{7}\right)^{-1} \Rightarrow \text{Reciprocal of } \frac{-3}{7}$$

The reciprocal of $\frac{-3}{7}$ is $\frac{7}{-3}$, i.e., $\frac{-7}{3}$

Q12

Answer:

(a) $\dfrac{-2}{3}$

Let the other number be x.

Now,

$$x \times \dfrac{14}{27} = \dfrac{-28}{81}$$

$$\Rightarrow x = \dfrac{-28}{81} \div \dfrac{14}{27}$$

$$= \dfrac{-28}{81} \times \dfrac{27}{14}$$

$$= \dfrac{(-28) \times 27}{81 \times 14}$$

$$= \dfrac{-(28 \times 27)}{81 \times 14}$$

$$= \dfrac{-(2 \times 3)}{9 \times 1}$$

$$= \dfrac{-6}{9}$$

$$= \dfrac{-2}{3}$$

Thus, the other number is $\dfrac{-2}{3}$

********** END *********