Rational Numbers Ex 4.2 Q6

Answer :

Rational number with numerator:

$\left(\text{i}\right)\ 64$ as numerator : $\frac{-192/-3}{108/-3} = \frac{64}{-36}$ $\left(\text{Dividing the numerator and denomintor by } -3\right)$

$\left(\text{ii}\right)\ -16$ as numerator : $\frac{-192/12}{108/12} = \frac{-16}{9}$ $\left(\text{Dividing the numerator and denomintor by } 12\right)$

$\left(\text{iii}\right)\ 32$ as numerator : $\frac{-192/-6}{108/-6} = \frac{32}{-18}$ $\left(\text{Dividing the numerator and denomintor by } -6\right)$

$\left(\text{iv}\right)\ -48$ as numerator

: $\frac{-192/4}{108/4} = \frac{-48}{27}$ $\left(\text{Dividing the numerator and denomintor by } 4\right)$

Rational Numbers Ex 4.2 Q7

Answer :

Rational number with denominator:

$\left(\text{i}\right)\ 14$ as denominator : $\frac{168/-21}{-294/-21} = \frac{-8}{14}$ $\left(\text{Dividing the numerator and denomintor by } -21\right)$

$\left(\text{ii}\right)\ -7$ as denominator : $\frac{168/42}{-294/42} = \frac{4}{-7}$ $\left(\text{Dividing the numerator and denomintor by } 42\right)$

$\left(\text{iii}\right)\ -49$ as denominator : $\frac{168/6}{-294/6} = \frac{28}{-49}$

$\left(\text{Dividing the numerator and denomintor by } 6\right)$

$\left(\text{iv}\right)\ 1470$ as denominator : $\frac{168\times-5}{-294\times-5} = \frac{-840}{1470}$

$\left(\text{Multiplying the numerator and denomintor by } -5\right)$

Rational Numbers Ex 4.2 Q8

Answer :

Rational number with numerator:

$\left(i\right)\ -2$ is : $\frac{-14/7}{42/7} = \frac{-2}{6}$ $\left(\text{ Dividing numerator and denominator by } 7\right)$

$\left(ii\right)\ 7$ is : $\frac{-14/-2}{42/-2} = \frac{7}{-21}$ $\left(\text{ Dividing numerator and denominator by } -2\right)$

$\left(iii\right)\ 42$ is : $\frac{-14\times-3}{42\times-3} = \frac{42}{-126}$ $\left(\text{Multiplying numerator and denominator by } -3\right)$

$\left(iv\right)\ -70$ is : $\frac{-14\times5}{42\times5} = \frac{-70}{210}$ $\left(\text{ Multiplying numerator and denominator by } 5\right)$

Rational Numbers Ex 4.2 Q9

Answer :

Given rational numbers that can be written as a rational number with numerator 6 are:

$\frac{1}{22}\ \left(\text{On multiplying by } 6\right) = \frac{6}{132}$

$\frac{2}{3}\ \left(\text{On multiplying by } 3\right) = \frac{6}{9}$

$\frac{3}{4}\ \left(\text{On multiplying by } 2\right) = \frac{6}{8}$

$\frac{-6}{7}\ \left(\text{On multiplying by } -1\right) = \frac{6}{-7}$

Rational Numbers Ex 4.2 Q10

Answer :

Given rational numbers that can be written as a rational number with denominator 4 are:

$\frac{7}{8}\left(\text{On dividing by } 2\right) = \frac{3.5}{4}$

$\frac{64}{16}\left(\text{On dividing by } 4\right) = \frac{16}{4}$

$\frac{36}{-12}\left(\text{On dividing by } 3\right) = \frac{12}{-4} = \frac{-12}{4}$

$\frac{-16}{17}$ can't be expressed with a denominator 4.

$\frac{5}{-4}\left(\text{On multiplying by } -1\right) = \frac{-5}{4}$

$\frac{140}{28}\left(\text{On dividing by } 7\right) = \frac{20}{4}$

Rational Numbers Ex 4.2 Q11

Answer :

Equivalent forms of the rational number having common denominator are:

(i) $\frac{3}{4} = \frac{3\times3}{4\times3} = \frac{9}{12}$ and $\frac{5}{12}$.

(ii)

$\frac{2}{3} = \frac{2\times4}{3\times4} = \frac{8}{12}$ and $\frac{7}{6} = \frac{7\times2}{6\times2} = \frac{14}{12}$ *and* $\frac{11}{12}$

Forms are $\frac{8}{12}$, $\frac{14}{12}$ and $\frac{11}{12}$

(iii)

$\frac{5}{7} = \frac{5\times24}{7\times24} = \frac{120}{168}$, $\frac{3}{8} = \frac{3\times21}{8\times21} = \frac{63}{168}$, $\frac{9}{14} = \frac{9\times12}{14\times12} = \frac{108}{168}$ *and* $\frac{20}{21} = \frac{20\times8}{21\times8} = \frac{160}{168}$

Forms are $\frac{120}{168}$, $\frac{63}{168}$, $\frac{108}{168}$ and $\frac{160}{168}$

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