Rational Numbers Ex 4.3 Q1

Answer :

(i) We observe that 65 and 84 have no common factor i..e., their HCF is 1.

Thus, $\frac{65}{84}$ is in its lowest form.

(ii) We observe that -15 and 32 have no common factor i..e., their HCF is 1.

Thus, $\frac{-15}{32}$ is in its lowest form.

(iii) HCF of 24 and 128 is not 1.

Thus, given rational number is not in its simplest form.

(iv) HCF of 56 and 32 is 8.

Thus, given rational number is not in its simplest form.

Rational Numbers Ex 4.3 Q2

Answer :

Lowest form of:

(i) $\frac{4}{22}$ is :

$4 = 2 \times 2$

$22 = 2 \times 11$

HCF of 4 and 22 is 2.

Dividing the fraction by 2, we get $\frac{2}{11}$.

(ii) $\frac{-36}{180}$ is :

$36 = 3 \times 3 \times 2 \times 2$

$180 = 5 \times 3 \times 3 \times 2 \times 2$

HCF of 36 and 180 is 36.

Dividing the fraction by 36, we get $\frac{-1}{5}$

(iii) $\frac{132}{-428}$ is :

$132 = 2 \times 3 \times 2 \times 11$

$428 = 2 \times 2 \times 107$

HCF of 132 and 428 is 4.

Dividing the fraction by 4, we get $\frac{33}{-107}$

(iv) $\frac{-32}{-56}$ is :

$32 = 2 \times 2 \times 2 \times 2 \times 2$

$56 = 2 \times 2 \times 2 \times 7$

HCF of 32 and 56 is 8.

Dividing the fraction by 8, we get $\frac{4}{7}$

Rational Numbers Ex 4.3 Q3

Answer :

(i)

Here, $\frac{-5\times5}{7\times5} = \frac{-25}{35}$

Also, $\frac{-5\times7}{7\times7} = \frac{-35}{49}$.

Therefore, $\frac{-5}{7} = \frac{-25}{35} = \frac{-35}{49}$

(ii) Here, $\frac{-4\times-2}{-9\times-2} = \frac{8}{18}$

Also, $\frac{-4\times-3}{-9\times-3} = \frac{12}{27}$

Therefore, $\frac{-4}{-9} = \frac{8}{18} = \frac{12}{27}$

(iii) Here, $\frac{6\times-2}{-13\times-2} = \frac{-12}{26}$

Also, $\frac{6\times4}{-13\times4} = \frac{24}{-52}$

Therefore, $\frac{6}{-13} = \frac{-12}{26} = \frac{24}{-52}$

(iv) Here, $\frac{-6/-2}{-22/-2} = \frac{3}{11}$

Also, $\frac{-6}{-22} = \frac{3\times-5}{11\times-5} = \frac{-15}{-55}$

Therefore, $\frac{-6}{-22} = \frac{3}{11} = \frac{-15}{-55}$

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