



Exercise 4A

$$\begin{array}{r}
 161 \overline{)299} \begin{array}{l} 1 \\ -161 \\ \hline 138 \end{array} \begin{array}{l} 161 \overline{)138} \begin{array}{l} 1 \\ -138 \\ \hline 0 \end{array} \\ \hline 23 \overline{)138} \begin{array}{l} 6 \\ -138 \\ \hline 0 \end{array} \\ \hline \times
 \end{array}$$

H.C.F. of 299 and 161 is 23.

Dividing both the numerator and the denominator by 23:

$$\frac{-299 \div 23}{161 \div 23} = \frac{-13}{7}$$

Hence, $\frac{299}{-161}$ is equal to $\frac{-13}{7}$ in the standard form.

Q18

Answer :

(i)

$$\begin{aligned}
 \frac{-9 \times 4}{5 \times 4} &= \frac{-36}{20} \\
 \frac{-9 \times (-3)}{5 \times (-3)} &= \frac{27}{-15} \\
 \frac{-9 \times 5}{5 \times 5} &= \frac{-45}{25} \\
 \therefore \frac{-9}{5} &= \frac{-36}{20} = \frac{27}{-15} = \frac{-45}{25}
 \end{aligned}$$

(ii)

$$\begin{aligned}
 \frac{-6 \times 3}{11 \times 3} &= \frac{-18}{33} \\
 \frac{-6 \times 4}{11 \times 4} &= \frac{-24}{44} \\
 \therefore \frac{-6}{11} &= \frac{-18}{33} = \frac{-24}{44}
 \end{aligned}$$

Q19

Answer :

(i) $\frac{-13}{7}, \frac{39}{-21}$

We have:

$$(-13) \times (-21) = 273$$

$$\text{And } 7 \times 39 = 273$$

$$(-13) \times (-21) = 7 \times 39$$

$$\text{or } \frac{-13}{7} = \frac{39}{-21}$$

Hence, $\frac{-13}{7}$ and $\frac{39}{21}$ are equivalent rational numbers.

(ii) $\frac{3}{-8}, \frac{-6}{16}$

We have:

$$3 \times 16 = 48$$

$$\text{And } (-8) \times (-6) = 48$$

$$\therefore 3 \times 16 = (-8) \times (-6)$$

$$\frac{3}{-8} = \frac{-6}{16}$$

(iii) $\frac{9}{4}, \frac{-36}{-16}$

We have:

$$9 \times (-16) = -144$$

***** END *****