Exercise 1E

Q1

Answer :

(i)

$\frac{4}{9} \div \frac{-5}{12}$

$= \frac{4}{9} \times \frac{12}{-5}$

$= \frac{4 \times 12}{9 \times -5}$

$= \frac{48}{-45}$

$= \frac{-48}{45}$

$= \frac{-16}{15}$

(ii)

$-8 \div \frac{-7}{16}$

$= -8 \times \frac{16}{-7}$

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

$= \frac{128}{7}$

(iii)

$\frac{-12}{7} \div (-18)$

$= \frac{-12}{7} \times \frac{1}{-18}$

$$= \frac{12}{126}$$

$$= \frac{12 \div 3}{126 \div 3}$$

$$= \frac{4}{42}$$

$$= \frac{4 \div 2}{42 \div 2}$$

$$= \frac{2}{21}$$

$$\left(\text{iv}\right)$$

$$\frac{-1}{10} \div \frac{-8}{5}$$

$$= \frac{-1}{10} \times \frac{5}{-8}$$

$$= \frac{5}{80}$$

$$= \frac{5 \div 5}{80 \div 5}$$

$$= \frac{1}{16}$$

$$\frac{-1}{10} \div \frac{-8}{5}$$

$$= \frac{-1}{10} \times \frac{5}{-8}$$

$$= \frac{5}{80}$$

$$= \frac{5 \div 5}{80 \div 5}$$

$$= \frac{1}{16}$$

$$\left(\mathbf{v}\right)$$

$$\frac{-16}{35} \div \frac{-15}{14}$$

$$= \frac{-16}{35} \times \frac{14}{-15}$$

$$= \frac{224}{525}$$

$$\left(\mathbf{vi}\right)$$

$$\frac{-65}{14} \div \frac{13}{7}$$

$$= \frac{-65}{14} \times \frac{7}{13}$$

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

Q2

Answer :

(i)

$\frac{13}{5} \div \frac{26}{10} = \frac{26}{10} \div \frac{13}{5}$

LHS

$\frac{13}{5} \div \frac{26}{10}$

$= \frac{13}{5} \times \frac{10}{26}$

$= \frac{130}{130}$

$= 1$

RHS

$\frac{26}{10} \div \frac{13}{5}$

$= \frac{26}{10} \times \frac{5}{13}$

$= \frac{130}{130}$

$= 1$

TRUE

(ii) $-9 \div \frac{3}{4} = \frac{3}{4} \div (-9)$ LHS $-9 \div \frac{3}{4} = -9 \times \frac{4}{3} = \frac{-36}{3} = -12$ RHS $\frac{3}{4} \div (-9) = \frac{3}{4} \times \frac{1}{-9}$

$= \frac{3}{-36} = \frac{-1}{12}$ FALSE iii) $\frac{-8}{9} \div \frac{-4}{3} = \frac{-4}{3} \div \frac{-8}{9}$ LHS $\frac{-8}{9} \div \frac{-4}{3}$

$= \frac{-8}{9} \times \frac{3}{-4} = \frac{24}{36} = \frac{2}{3}$ RHS $\frac{-4}{3} \div \frac{-8}{9} = \frac{-4}{3} \times \frac{9}{-8} = \frac{36}{24}$

$= \frac{3}{2}$ FALSE (iv) $\frac{-7}{24} \div \frac{3}{-16} = \frac{3}{-16} \div \frac{-7}{24}$ LHS $\frac{-7}{24} \times \frac{-16}{3}$

$= \frac{112}{72}$ RHS $\frac{3}{-16} \div \frac{-7}{24} = \frac{3}{-16} \times \frac{24}{-7} = \frac{72}{112}$ FALSE

Q3

Answer :

(i)

$\left(\frac{5}{9} \div \frac{1}{3}\right) \div \frac{5}{2} = \frac{5}{9} \div \left(\frac{1}{3} \div \frac{5}{2}\right)$

LHS

$\left(\frac{5}{9} \div \frac{1}{3}\right) \div \frac{5}{2}$

$= \left(\frac{5}{9} \times \frac{3}{1}\right) \times \frac{2}{5}$

$= \frac{5 \times 3 \times 2}{9 \times 1 \times 5}$

$= \frac{30}{45}$

$= \frac{2}{3}$

RHS

$\frac{5}{9} \div \left(\frac{1}{3} \div \frac{5}{2}\right)$

$= \frac{5}{9} \div \left(\frac{1}{3} \times \frac{2}{5}\right)$

$= \frac{5}{9} \div \left(\frac{2}{15}\right)$

$= \frac{5}{9} \times \left(\frac{15}{2}\right) = \frac{75}{18}$

$= \frac{25}{6}$

LHS $\neq$ RHS

FALSE

FALSE

(ii)

$$\left[\left(-16\right) \div \frac{6}{5}\right] \div \frac{-9}{10} = \left(-16\right) \div \left[\frac{6}{5} \div \frac{-9}{10}\right]$$

LHS

$$= \left[\left(-16\right) \div \frac{6}{5}\right] \div \frac{-9}{10}$$

$$= \left[\left(-16\right) \times \frac{5}{6}\right] \times \frac{10}{-9}$$

$$= \frac{(-16) \times 5 \times 10}{6 \times (-9)}$$

$$= \frac{800}{54}$$

$$= \frac{400}{27}$$

RHS

$$\left(-16\right) \div \left(\frac{6}{5} \div \frac{-9}{10}\right)$$

$$= \left(-16\right) \div \left(\frac{6}{5} \times \frac{10}{-9}\right)$$

$$= -16 \div \left\{\frac{-60}{45}\right\}$$

$$= -16 \times \left(\frac{-45}{60}\right)$$

$$= \frac{48}{4}$$

$$= 12$$

LHS $\neq$ RHS

FALSE

(iii)

$$\left(\frac{-3}{5} \div \frac{-12}{35}\right) \div \frac{1}{14} = \frac{-3}{5} \div \left(\frac{-12}{35} \div \frac{1}{4}\right)$$

LHS

$$= \left(\frac{-3}{5} \times \frac{35}{-12}\right) \times 14$$

$$(-3) \times 35 \times 14$$

$$= \frac{(-3)\times 35\times 14}{5\times(-12)}$$

$$= \frac{1470}{60}$$

$$= \frac{49}{2}$$

RHS

$$= \frac{-3}{5} \div \left(\frac{-12}{35} \div \frac{1}{4} \right)$$

$$= \frac{-3}{5} \div \left(\frac{-12}{35} \times \frac{4}{1} \right)$$

$$= \frac{-3}{5} \div \left(\frac{-12\times 4}{35} \right)$$

$$= \frac{-3}{5} \div \left(\frac{-12\times 4}{35} \right)$$

$$= \frac{-3}{5} \div \left(\frac{-48}{35} \right)$$

$$= \frac{-3}{5} \times \frac{35}{-48}$$

$$= \frac{3\times 35}{5\times 48}$$

$$= \frac{105}{240}$$

$$= \frac{7}{16}$$

LHS $\neq$ RHS

FALSE

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