Class 7-Mathematics

(Assignment 2)

Instructions for students: The notes provided must be copied to the Maths copy and then do the homework in the same copy.

Chapter 3

RATIONAL NUMBERS

(part 2)

Exercise 3.3

2. ii) $-\frac{1}{18}+-\frac{3}{8}$ = $\frac{(-1\times4)+(-3\times9)}{72}$ L.C.M of 18 and 8 = 72

= $\frac{-4+-27}{72}$

= $\frac{-31}{72}$

4. iii) $3\frac{1}{8}-\left(-1\frac{5}{6}\right)$ = $\frac{25}{8}-\left(\frac{-11}{6}\right)$

= $\frac{25}{8}+\left(\frac{11}{6}\right)$ [Adding the additive inverse of $\frac{-11}{6}$ i.e. $\frac{11}{6}$]

= $\frac{25\times3+11\times4}{24}$

= $\frac{75+44}{24}$

= $\frac{119}{24}$ = $4\frac{23}{24}$

5. Hint: Subtract $\frac{-4}{7}$ from $\frac{2}{5}$

6. Hint: Subtract $\frac{-5}{12}$ from $\frac{-7}{8}$

8. vi) $\frac{-105}{128}\times\left(-1\frac{29}{35}\right)$ = $\frac{-105}{128}\times\left(\frac{-64}{35}\right)$

= $\frac{\cancel{-105}^{-3}}{\cancel{128}\,2}\times\frac{\cancel{-64}\ -1}{\cancel{35}\ 1}$ [Reducing to Lowest terms]

= $\frac{-3\times-1}{2\times1}$

= $\frac{3}{2}$ = $1\frac{1}{2}$

9. v) $\frac{-48}{49}\div\frac{72}{-35}$ = $\frac{-48}{49}\times\frac{-35}{72}$ [Multiplying with reciprocal]

$= \frac{\cancel{-48}^{-2}}{\cancel{49}_{7}} \times \frac{\cancel{-35}^{-5}}{\cancel{72}_{3}}$ [Reducing to Lowest terms]

$= \frac{-2}{7} \times \frac{-5}{3}$

$= \frac{-2 \times -5}{7 \times 3}$

$= \frac{10}{21}$

10. Hint: The other number = $\frac{18}{35} \div \frac{-2}{5}$

11. i) Find the value of $\left(\frac{13}{21} \div \frac{39}{42}\right) \times \frac{-3}{5}$

$\left(\frac{13}{21} \div \frac{39}{42}\right) \times \frac{-3}{5} = \left(\frac{\cancel{13}^{1}}{\cancel{21}_{1}} \times \frac{\cancel{42}^{2}}{\cancel{39}_{3}}\right) \times \frac{-3}{5}$ [Simplifying inside the bracket using BODMAS rule]

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

$= \frac{2}{\cancel{3}_{1}} \times \frac{\cancel{-3}^{-1}}{5}$

$= \frac{2 \times -1}{1 \times 5}$

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

12. ii) Find the reciprocal of $\left(-5 \times \frac{12}{15}\right) - \left(-3 \times \frac{2}{9}\right)$

Here we simplify the given expression and write as a single fraction

$\left(-5 \times \frac{12}{15}\right) - \left(-3 \times \frac{2}{9}\right) = (-1 \times 4) - \left(-1 \times \frac{2}{3}\right)$ [Taking lowest terms Inside each bracket]

$= (-4) - \left(\frac{-2}{3}\right)$

$= -4 + \frac{2}{3}$

$= \frac{(-4 \times 3) + 2}{3}$

$= \frac{-12 + 2}{3}$

$= \frac{-10}{3}$

Reciprocal of $\frac{-10}{3} = \frac{3}{-10}$ or $\frac{-3}{10}$

Home Work: Complete Exercise 3.3 in the Maths copy.