

Ex-2C.

Ex. 2.C.

1. Write down the reciprocal of:

i $\frac{5}{8}$

The reciprocal of $\frac{5}{8}$ is $\frac{8}{5}$

ii 7

The reciprocal of 7 is $\frac{1}{7}$

iii $\frac{1}{12}$

The reciprocal of $\frac{1}{12}$ is $\frac{12}{1}$

iv $12 \frac{3}{5} = \frac{63}{5}$

The reciprocal of $\frac{63}{5}$ is $\frac{5}{63}$

The Reciprocal of $\frac{63}{5}$ is $\frac{5}{63}$

2. Simplify.

i $\frac{4}{7} \div \frac{9}{14} = \frac{4}{7} \times \frac{14}{9}$

$= \frac{4 \times 14}{7 \times 9}$

$= \frac{8}{9}$

$$\text{ii} \quad \frac{7}{10} \div \frac{3}{5} = \frac{7}{10} \times \frac{5}{3}$$

$$= \frac{7 \times \cancel{5}^1}{\cancel{10}_2 \times 3}$$

$$= \frac{7}{6} = \boxed{1 \frac{1}{6}}$$

$$\text{iii} \quad \frac{8}{9} \div 16 = \frac{8}{9} \times \frac{1}{16}$$

$$= \frac{\cancel{8}^1 \times 1}{9 \times \cancel{16}_2}$$

$$= \boxed{\frac{1}{18}}$$

iv

$$9 \div \frac{1}{3} = \frac{9}{1} \times \frac{3}{1}$$

$$= \frac{9 \times 3}{1 \times 1} = 27$$

$$= \boxed{27}$$

v

$$24 \div \frac{6}{7} = \frac{24}{1} \times \frac{7}{6}$$

$$\frac{\cancel{24}_4 \times 7}{1 \times \cancel{6}_2}$$

$$= \frac{28}{1} = \boxed{28}$$

vi

$$3 \frac{3}{5} \div \frac{4}{5} = \frac{18}{5} \times \frac{5}{4}$$



$$= \frac{18 \times 51}{51 \times 4}$$

$$= \frac{18}{4} = \frac{9}{2} = 4 \frac{1}{2}$$

$$\text{vii} \quad \frac{33}{7} \div \frac{8}{21} = \frac{24}{7} \times \frac{21}{8}$$

$$= \frac{24 \times 21}{7 \times 8}$$

$$= \frac{9}{1}$$

$$\text{viii} \quad \frac{54}{7} \div \frac{13}{10} = \frac{39}{7} \div \frac{13}{10}$$

$$= \frac{39}{7} \times \frac{10}{13}$$

$$= \frac{39 \times 10}{7 \times 13}$$

$$= \frac{30}{7}$$

$$\text{ix} \quad \frac{153}{7} \div \frac{123}{49} = \frac{108}{7} \div \frac{72}{49}$$

$$= \frac{108}{7} \times \frac{49}{72}$$

$$= \frac{108 \times 49}{7 \times 72}$$

$$= \frac{63}{6}$$

3. Divide:

$$i. \frac{11}{24} \text{ by } \frac{7}{8} = \frac{11}{24} \times \frac{8}{7}$$

$$= \frac{11 \times 8}{24 \times 7}$$

$$= \boxed{\frac{11}{21} = \frac{1}{1}}$$

$$ii. 6\frac{7}{8} \text{ by } \frac{11}{16} = \frac{55}{8} \times \frac{16}{11}$$

$$= \frac{55 \times 16}{8 \times 11}$$

$$= \boxed{10}$$

$$iii. 5\frac{5}{9} \text{ by } 3\frac{1}{3} = \frac{50}{9} \div \frac{10}{3}$$

$$= \frac{50}{9} \times \frac{3}{10}$$

$$= \frac{50 \times 3}{9 \times 10}$$

$$= \boxed{\frac{5}{3}}$$

$$iv. 32 \text{ by } 1\frac{3}{5} = 32 \div \frac{8}{5}$$

$$= 32 \times \frac{5}{8}$$

$$= 4 \times 5 = \boxed{20}$$



$$v \quad 45 \text{ by } 1 \frac{4}{5} = 45 \div \frac{9}{5}$$

$$= 45 \times \frac{5}{9}$$

$$= 5 \times 5 = \boxed{25}$$

$$vi \quad 63 \text{ by } 2 \frac{1}{4} = 63 \div \frac{9}{4}$$

$$= 63 \times \frac{4}{9}$$

$$= 7 \times 4 = \boxed{28}$$

4. A Rope is of length $13\frac{1}{2}$ m has been divided into 9 pieces of the same length. What is length of each piece?

→ Length of a rope = $13\frac{1}{2}$ m = $\frac{27}{2}$ m
Number of equal pieces = 9

length of each piece = $(\frac{27}{2} \div 9)$ m

$$= \left(\frac{27}{2} \times \frac{1}{9} \right)$$

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

Hence, the length of each piece of rope is $1\frac{1}{2}$ m

5. 18 boxes of nails weigh equally and their total weight is $49\frac{1}{2}$ kg. How much does each of boxes weigh?

→ Weight of 18 boxes of nails = $49\frac{1}{2}$ kg = $\frac{99}{2}$ kg
Weight of 1 box = $(\frac{99}{2} \div 18)$ kg



$$= \left(\frac{99}{2} \times \frac{1}{18} \right) \text{ kg} = \frac{11}{33} \times \frac{1}{2 \times 18} = \frac{11}{12} = \frac{33}{12}$$

$$= \left(\frac{99 \times 1}{2 \times 18} \right) \text{ kg} = \left(\frac{11 \times 1}{2 \times 2} \right) \text{ kg} = \frac{11}{4} \text{ kg} = 2 \frac{3}{4} \text{ kg}$$

Hence, the weight of each box is

$$\boxed{2 \frac{3}{4} \text{ kg}}$$