Exercise 2C

03

Answer :

(i) $\frac{11}{24} \div \frac{7}{8}$

$= \frac{11}{24} \times \frac{8}{7}$ [∵ Reciprocal of $\frac{7}{8} = \frac{8}{7}$]

$= \frac{11}{21}$

(ii) $6\frac{7}{8} \div \frac{11}{16} = \frac{55}{8} \div \frac{11}{16}$

$= \frac{55}{8} \times \frac{16}{11}$ [∵ Reciprocal of $\frac{11}{16} = \frac{16}{11}$]

$= 5 \times 2 = 10$

(iii) $5\frac{5}{9} \div 3\frac{1}{3} = \frac{50}{9} \div \frac{10}{3}$

$= \frac{50}{9} \times \frac{3}{10}$ [∵ Reciprocal of $\frac{10}{3} = \frac{3}{10}$]

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

(iv) $32 \div 1\frac{3}{5} = 32 \div \frac{8}{5}$

$= 32 \times \frac{5}{8}$ [∵ Reciprocal of $\frac{8}{5} = \frac{5}{8}$]

$= 4 \times 5 = 20$

(v) $45 \div 1\frac{4}{5} = 45 \div \frac{9}{5}$

$= 45 \times \frac{5}{9}$ [∵ Reciprocal of $\frac{9}{5} = \frac{5}{9}$]

$= 5 \times 5 = 25$

(vi) $63 \div 2\frac{1}{4} = 63 \div \frac{9}{4}$

$= 63 \times \frac{4}{9}$ [∵ Reciprocal of $\frac{9}{4} = \frac{4}{9}$]

$= 7 \times 4 = 28$

04

Answer :

Length of the rope = $13\frac{1}{2}$ m = $\frac{27}{2}$ m

Number of equal pieces = 9

∴ Length of each piece = $\left(\frac{27}{2} \div 9\right)$ m

$= \left(\frac{27}{2} \times \frac{1}{9}\right)$ m [∵ Reciprocal of $9 = \frac{1}{9}$]

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

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

05

Answer :

Weight of 18 boxes of nails = $49\frac{1}{2}$ kg = $\frac{99}{2}$ kg

∴ Weight of 1 box = $\left(\frac{99}{2} \div 18\right)$ kg

$= \left(\frac{99}{2} \times \frac{1}{18}\right)$ kg [∵ Reciprocal of $18 = \frac{1}{18}$]

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

Hence, the weight of each box is $2\frac{3}{4}$ kg.

06

Answer :

Cost of 1 orange = Rs $3\frac{3}{4}$ = Rs $\frac{15}{4}$

Total cost of the oranges sold by the man = Rs 210

$\therefore$ Required number of oranges = $\left(210 \div \frac{15}{4}\right)$

$= \left(210 \times \frac{4}{15}\right)$ [$\because$ Reciprocal of $\frac{15}{4} = \frac{4}{15}$]

$= (14 \times 4) = 56$

Hence, the man sold 56 oranges.

Answer :

Cost of 1 kg of mangoes = Rs $18\frac{1}{2}$ = Rs $\frac{37}{2}$

Total cost of the required mangoes = Rs $157\frac{1}{4}$ = Rs $\frac{629}{4}$

$\therefore$ Weight of the required mangoes = $\left(\frac{629}{4} \div \frac{37}{2}\right)$ kg

$= \left(\frac{629}{4} \times \frac{2}{37}\right)$ kg [$\because$ Reciprocal of $\frac{37}{2} = \frac{2}{37}$]

$= \left(\frac{17}{2}\right)$ kg = $8\frac{1}{2}$ kg

Hence, the weight of the mangoes available for Rs $157\frac{1}{4}$ is $8\frac{1}{2}$ kg.

07

Answer :

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