

Ex 11 (A)

H.W.

$$1. (a) i) 4:6 = \frac{4 \div 2}{6 \div 2} = \frac{2}{3} \Rightarrow 2:3$$

$$ii) 48:54 = \frac{48 \div 6}{54 \div 6} = \frac{8}{9} \Rightarrow 8:9$$

$$(b) iii) 200 : 250 = \frac{200 \div 100}{250 \div 100} = \frac{20}{25} = \frac{20 \div 5}{25 \div 5} \Rightarrow 4:5$$

$$(b) i) 5\text{kg} : 800\text{gm} = 5\text{kg} = 5000\text{gm}$$

$$\begin{aligned} &= 5000\text{gm} : 800\text{gm} \\ &= \frac{5000}{800} \end{aligned}$$

$$= \frac{25}{4} \Rightarrow 25:4$$

$$ii) 30\text{cm} : 2\text{m} = 2\text{m} = 200\text{cm}$$

$$= 30\text{cm} : 200\text{cm}$$

$$= \frac{30}{200} = \frac{3}{20} \Rightarrow 3:20$$

$$iii) 3\text{m} : 90\text{cm} = 3\text{m} = 300\text{cm}$$

$$\begin{aligned} &= 300\text{cm} : 90\text{cm} \\ &= \frac{300}{90} = \frac{10}{3} = 10:3 \end{aligned}$$

$$\text{iv) } 24 \text{ years} : 9 \text{ months}$$

$$= 2 \text{ years} = 24 \text{ months}$$

$$= 24 \text{ months} : 9 \text{ months}$$

$$= \frac{24}{9} = 8 \frac{2}{3}$$

$$= \frac{8 \cancel{24} \text{ months}}{3 \cancel{9} \text{ months}} = \frac{8}{3} \Rightarrow 8:3$$

① i) $1\frac{1}{2} : 2\frac{1}{2}$

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

$$= \frac{3}{\cancel{2}} \times \frac{\cancel{2}}{5} = \frac{3}{5} \Rightarrow 3:5$$

ii) $3\frac{1}{2} : 7$ μ

$$= \frac{7}{2} : 7$$

$$= \frac{\cancel{7}}{2} \times \frac{1}{\cancel{7}} = \frac{1}{2} \Rightarrow 1:2$$

iii) $2\frac{1}{3} : 3\frac{1}{2} : 1\frac{1}{4}$

$$= \frac{7}{3} : \frac{7}{2} : \frac{5}{4}$$

μ $\left. \begin{array}{l} \{ \text{We have to find the LCM} \\ \{ \text{to make them} \\ \{ \text{like fractions} \} \end{array} \right\}$

$$= \frac{7}{\cancel{2}} \times \cancel{2}^4 : \frac{7}{\cancel{2}} \times \cancel{2}^6 : \frac{5}{\cancel{4}} \times \cancel{2}^3$$

$$= 28 : 42 : 15$$

$$\text{iv) } x^2 : 4x$$

$$= \frac{x \times x}{4}$$

$$= \frac{x^2}{4x}$$

$$= \frac{x \times x}{4 \times x} = \frac{x}{4} \Rightarrow x : 4$$

$$\text{v) } 2.5 : 1.5$$

$$= \frac{2.5}{1.5} = \frac{250}{150} = \frac{25 \times 10}{15 \times 10}$$

$$= \frac{25}{15} = \frac{5}{3} \Rightarrow 5 : 3$$

$$\text{vi) } 2.5 : 5$$

$$= \frac{2.5}{5} = \frac{25}{50} = \frac{1}{2} = 1 : 2$$

2. Ans Sol. $60 \text{ m} : 80 \text{ m} = \frac{300}{400}$

$$= \frac{3}{4} = 3 : 4$$

3. i) A ratio equivalent to $7:9$ is $27:31$. False

ii) A ratio equivalent to $5:4$ is $240:192$. True

~~iii) A ratio equivalent to 3 of 250 gm.~~

iii) A ratio is of 250 gm and 3 kg is $1:12$. True

4. Yes, because:

$$\text{Ratio of } 15\text{kg and } 35\text{kg} = \frac{3 \cancel{15} \text{ kg}}{7 \cancel{35} \text{ kg}} = \frac{3}{7} = 3:7$$

$$\text{Ratio of } 6\text{ years and } 14\text{ years} = \frac{3 \cancel{6} \text{ yrs}}{7 \cancel{14} \text{ yrs}} = \frac{3}{7} = 3:7$$

They are same.

5. Yes, because

$$\text{Ratio of } 6\text{g and } 15\text{g} = \frac{\cancel{6}^2}{\cancel{15}_5\cancel{3}}$$

$$= \frac{2}{5} \Rightarrow 2:5$$

$$\text{Ratio of } 36\text{ cm and } 90\text{ cm} = \frac{\cancel{36}^2\cancel{18}\cancel{2}}{\cancel{90}_5\cancel{18}\cancel{2}} \text{ cm}$$

$$= \frac{2}{5} \Rightarrow 2:5$$

are same

$$6. \quad 3.5m : 475 \text{ cm} : 2.8m$$

$$\Rightarrow 350 \text{ cm} : 475 \text{ cm} : 280 \text{ cm}$$

$$\Rightarrow \frac{350 \text{ cm}}{475 \text{ cm}} = 70$$
$$\frac{475 \text{ cm}}{475 \text{ cm}} = 95$$
$$\frac{280 \text{ cm}}{475 \text{ cm}} = 56$$

$$\Rightarrow 70 : 95 : 56 \text{ (Ans.)}$$

$$7. \quad \begin{aligned} 5 \text{ dozens} &= 60 \\ 2 \text{ scores} &= 40 \end{aligned}$$

$$\text{Ratio} \Rightarrow 60 : 40 \text{ (Ans.)}$$

