

Ex 11. A

i) $4:6$

$\frac{4 \div 2}{6 \div 2}$

$\frac{2}{3}$

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

ii) $48:54$

$\frac{48 \div 6}{54 \div 6}$

$\frac{8}{9}$

$= \frac{8}{9} = 8:9$

iii) $200:250$

$\frac{200 \div 5}{250 \div 5}$

$\frac{40}{50}$

$= \frac{40}{50} = 40:50$

b) $5 \text{ kg} : 800 \text{ gm}$

$= 5000 \text{ gm} : 800 \text{ gm}$

$$\frac{5000 \text{ gm}}{800 \text{ gm}}$$

$$= \frac{1000}{160}$$

$$= \frac{250}{40}$$

$$= \frac{50}{8}$$

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

$= 25 : 4$

i) $30 \text{ cm} : 2 \text{ m}$

~~2 m~~

$2 \text{ m} = 100$

$2 \text{ m} = 100 \times 2$

$$= 200 \text{ cm}$$

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

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

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

$$= \frac{15 \text{ cm}}{100}$$

$$= \frac{3}{20}$$

$$= 3:20$$

$$\text{iii } 3 \text{ m} : 90 \text{ cm}$$

$$= 1 \text{ m} = 100 \text{ cm}$$

$$= 3 \text{ m} = 3 \times 100$$

$$= 300 \text{ cm}$$

$$= 300 \text{ cm} \cdot 90 \text{ cm}$$

$$= \frac{300 \text{ cm}}{90}$$

$$= \frac{150}{45}$$

$$= \frac{50}{15}$$

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

$$= 10 \cdot 3$$

iv 2 years, 9 months

$$= 1 \text{ year} - 12 \text{ months}$$

$$2 \text{ years} - 2 \times 12$$

$$= 24 \text{ months}$$

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

$$= \frac{24}{9}$$

$$= \frac{8}{3}$$

$$= 8:3$$

V 1 hour & 45 min

$$= 1 \text{ hour} = 60 \text{ min}$$

$$= 60 \text{ min} - 45 \text{ min}$$

$$= \frac{60}{40}$$

$$= \frac{30}{20}$$

$$= \frac{15}{10}$$

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

$$= 3:2$$

vi. 4 min, 45 sec

$$= 1 \text{ min} = 60 \text{ sec}$$

$$= 4 \text{ min} = 4 \times 60$$

$$= 240 \text{ sec}$$

$$= 240 \text{ sec} + 45 \text{ sec}$$

$$= \frac{240}{45}$$

$$45$$

$$= 80$$

$$\frac{15}{15}$$

$$= 16$$

$$\frac{3}{3}$$

3. False

True

True

4. Yes

5. Yes

~~true~~
true

$$\# \text{ dozen} = 12$$

$$5 \text{ dozen} = 12 \times 5 = 60$$

$$= 1 \text{ score} = 20$$

$$2 \text{ score} = 20 \times 2 = 40$$

$$= 80 : 40$$

$$= \frac{80}{40}$$

$$= \frac{30}{20}$$

$$= \frac{15}{10}$$

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

$$= 3 : 2$$

~~$1 \frac{1}{2} : 2 \frac{1}{2}$~~

~~= 0 = numerator & Whole Number~~

Rough

2 | 3, 2, 4

2 | 3, 1, 2

3 | 3, 1, 1

1, 1, 1

2 x 2 x 3

= 12

c. i) $1 \frac{1}{2} : 2 \frac{1}{2}$

ii) $3 \frac{1}{2} : 7$

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

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

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

= $\frac{7 \times 2}{2} = \frac{1}{2}$

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

= ~~$\frac{7}{2}$~~ = 1 : 2

= $\frac{6}{10}$

= $\frac{3}{5}$

= 3 : 5

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

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

= ~~$\frac{7}{12} : \frac{7}{12} : \frac{5}{12}$~~

* LCM of 3, 2 and 4 is ~~12~~ ¹²

$$= \frac{7 \times 12}{3} : \frac{7 \times 12}{2} : \frac{5 \times 12}{4}$$

$$= \frac{84}{3} : \frac{84}{2} : \frac{60}{4}$$

$$28 : 42 : 15$$

~~$$N \times 2 : 4X$$~~

$$1V \times^2 : 4X$$

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

~~$$\frac{X^2}{4X}$$~~

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

$$= X : 4$$

$$V \quad 2.5 : 1.5$$

N $2.5 : 1.5$

$= \frac{25}{10} : \frac{15}{10}$

$= \frac{25 \times \cancel{10}}{\cancel{10} \times 15}$

$= \frac{\cancel{25} \cdot 5}{\cancel{15} \cdot 3} = \frac{5}{3} = 5:3$

$= 25$

VII $2.5 : 5$

$= \frac{25}{10} : 5$

$= \frac{25 \times \cancel{5}}{\cancel{10} \times 5} = \frac{5}{2} = 1:2$

~~$= 25$~~

2
25
15
5

2. ~~length~~ ^{Width} of the field = 60m

~~width~~ ^{length} of the field = 80m

Ratio of Width to its Length = 60:80

$$\frac{60}{80}$$

$$\frac{3}{4}$$

$$= 3:4$$

∴ Ratio of width and length of field is 3:4

G. 1m = 100cm

3.5m = 3.5 × 100 = 350cm

1m = 100cm

2.8m = 2.8 × 100 = 280cm

350cm, 475cm, 280cm

∴ HCF of 350, 475 and 280 is 5

Rough

$$\frac{350}{5} : \frac{475}{5} : \frac{280}{5}$$

$$\begin{array}{r} 2 \overline{) 350} \\ 5 \overline{) 175} \\ 7 \overline{) 35} \\ 5 \end{array}$$

∴ 70 : 95 : 56

∴ The Ratio between 3.5 m, 475 cm and 2.8 m is 70 : 95 : 56

$$\begin{array}{r} 5 \overline{) 475} \\ 5 \overline{) 95} \\ 19 \end{array}$$

$$\begin{array}{r} 2 \overline{) 280} \\ 2 \overline{) 140} \\ 2 \overline{) 70} \\ 2 \overline{) 35} \\ 5 \end{array}$$

$$\begin{array}{l} 350 = 2 \times 5 \times 7 \times 5 \\ 475 = 5 \times 5 \times 19 \\ 280 = 2 \times 2 \times 2 \times 5 \times 7 \end{array}$$