



Q5. P and Q are partners sharing profits in 2:1 ratio. They admitted R into partnership giving him $\frac{1}{5}$ share which he acquired from P and Q in 1:2 ratio. Calculate new profit sharing ratio?
Solution.

$$\begin{aligned} \text{Old Ratio} &= \begin{array}{cc} \text{P:} & \text{Q} \\ 2: & 1 \end{array} \\ &= \frac{2}{3} : \frac{1}{3} \end{aligned}$$

R admits for $\frac{1}{5}$ share in the new firm which he taken from $\frac{1}{3}$ from P and $\frac{2}{3}$ from Q

$$\text{P's sacrifice} = \text{R's share} \times \frac{1}{3}$$

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

$$= \frac{1}{15}$$

$$\text{Q's sacrifice} = \text{R's share} \times \frac{2}{3}$$

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

$$= \frac{2}{15}$$

New Ratio = Old Ratio - Sacrificing Ratio

$$P = \frac{2}{3} - \frac{1}{15} = \frac{10-1}{15} = \frac{9}{15}$$

$$Q = \frac{1}{3} - \frac{2}{15} = \frac{5-2}{15} = \frac{3}{15}$$

$$\begin{array}{ccc} \text{P:} & \text{Q} & \text{:R} \\ \text{New Ratio} = & \frac{9}{15} : & \frac{3}{15} : \frac{1}{5} \end{array}$$

$$= \frac{9:3:3}{15}$$

$$= 9:3:3$$

Q6. A, B and C are partners sharing profits in 3:2:2 ratio. They admitted D as a new partner for $\frac{1}{5}$ share which he acquired from A, B and C in 2:2:1 ratio respectively. Calculate new profit sharing ratio?
Solution.

$$\begin{array}{rcl}
 & \text{A:} & \text{B} & \text{:C} \\
 \text{Old Ratio=} & 3: & 2: & 2 \\
 & = \frac{3}{7}: & \frac{2}{7}: & \frac{2}{7}
 \end{array}$$

D admits for $\frac{1}{5}$ share in the new firm which he taken $\frac{1}{5}$ in the ratio 2:2:1 from A, B and C.

$$\begin{aligned}
 \text{A's sacrifice} &= \text{D's share} \times \frac{2}{5} \\
 &= \frac{1}{5} \times \frac{2}{5} = \frac{2}{25}
 \end{aligned}$$

$$\begin{aligned}
 \text{B's sacrifice} &= \text{D's share} \times \frac{2}{5} \\
 &= \frac{1}{5} \times \frac{2}{5} = \frac{2}{25}
 \end{aligned}$$

$$\begin{aligned}
 \text{C's sacrifice} &= \text{D's share} \times \frac{1}{5} \\
 &= \frac{1}{5} \times \frac{1}{5} = \frac{1}{25}
 \end{aligned}$$

New Ratio = Old Ratio - Sacrificing Ratio

$$A = \frac{3}{7} - \frac{2}{25} = \frac{75 - 14}{175} = \frac{61}{175}$$

$$B = \frac{2}{7} - \frac{2}{25} = \frac{50 - 14}{175} = \frac{36}{175}$$

$$C = \frac{2}{7} - \frac{1}{25} = \frac{50 - 7}{175} = \frac{43}{175}$$

$$\begin{array}{rcl}
 & \text{A:} & \text{B} & \text{:C} & \text{:D} \\
 \text{New Ratio=} & \frac{61}{175}: & \frac{36}{175}: & \frac{43}{175}: & \frac{1}{5}
 \end{array}$$

$$= \frac{61:36:43:35}{175}$$

$$= 61:36:43:35$$

***** END *****