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

$$\text{Old Ratio} = \begin{matrix} P: & Q \\ 2: & 1 \end{matrix}$$

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

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

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

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

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

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

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

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

New Ratio = Old Ratio - Sacrificing Ratio

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

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

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

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

$$= 9:3:3$$

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

Old Ratio= A: 3: B 2: :C 2

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

D admits for $\frac{1}{5}$ share in the new firm which he taken $\frac{1}{5}$ in the ratio2:2:1 from A, B and C.

A's sacrifice = D's ahare $\times \frac{2}{5}$

$= \frac{1}{5} \times \frac{2}{5} = \frac{2}{25}$

B's sacrifice = D's ahare $\times \frac{2}{5}$

$= \frac{1}{5} \times \frac{2}{5} = \frac{2}{25}$

C's sacrifice = D's ahare $\times \frac{1}{5}$

$= \frac{1}{5} \times \frac{1}{5} = \frac{1}{25}$

New Ratio = Old Ratio - Sacrificing Ratio

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

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

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

New Ratio= A: $\frac{61}{175}$: B $\frac{36}{175}$: :C $\frac{43}{175}$: :D $\frac{1}{5}$

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

$= 61:36:43:35$

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