

IEM KOLKATA
RATIO AND PROPORTION
Instructor: Akash Bhattacharya

Q1) Seats for Mathematics, Physics and Biology in a school are in the ratio 5 : 7 : 8. There is a proposal to increase these seats by 40%, 50% and 75% respectively. What will be the ratio of increased seats?

- (a) 2 : 3 : 4 (b) 6 : 7 : 8 (c) 6 : 8 : 9 (d) 5 : 7 : 9

Q2) Ajay and Raj together have ₹1050. On taking ₹150 from Ajay, Ajay will have same amount as what Raj had earlier. Find the ratio of amounts with Ajay and Raj initially.

Q3) If $x:y=3:4$, then $(7x+3y):(7x-3y)$ is equal to?

Q4) If $a:b=5:7$ and $c:d=2a:3b$, then $ac:bd$ is?

Q5) Three numbers are in the ratio $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}$. The difference between greatest and smallest numbers is 36. Find the numbers.

Q6) The ratio of market prices of wheat and paddy is 2:3 and the ratio of quantities consumed in a family is 5:4. Find the ratio of expenditure of wheat and paddy.

Q7) ₹8400 is divided among A, B,C and D in such a way that the shares of A and B, B and C, and C and D are in the ratios 2:3, 4:5 and 6:7 respectively. The share of A is?

Q8) In a library, the ratio of number of story books to that of non-story books was 4:3 and total number of story books was 1248. When some more story books were bought, the ratio became 5:3. Find the number of story books bought.

Q9) A bag contains 1 rupee, 50 p & 25 p coins are in the ratio 5:6:7. If the total amount is ₹390. Find the number of coins of each kind?

Q10) In a zoo, there are rabbits & pigeons. If heads are counted, there are 340 heads and if legs are counted, there are 1060 legs. How many pigeons are there?

- (a) 120 (b) 150 (c) 180 (d) 170

Q11) If x is subtracted from each of 19, 27, 38 & 57, the numbers so obtained are in proportion. Find the value of $(22x + 5)$.

- (a) 108 (b) 115 (c) 119 (d) 125