



IBPS PRELIMS - 30 DAYS REVISION PLAN

CLASS 9 - RATIO, PROPORTION & PARTNERSHIP

Q1. One year ago, the ratio of Ramu and Somu's age was 6 : 7. Four years hence their ratio would become 7 : 8. How old is Somu?

- (a) 24 years
- (b) 30 years
- (c) 32 years
- ✓ (d) 36 years
- (e) None of these

$$\frac{6x + 5}{7x + 5} = \frac{7}{8}$$

Handwritten solution for the ratio problem:

1 year ago → 6 : 7
4 year later → 7 : 8

1 → 5
7 → 35 one year ago



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Q2. The ratio of income of A and B is 3 : 4. If the ratio of expenditure of both is 2 : 3 and each saves Rs 200, find the income of both A and B.

$$\begin{array}{l} I \rightarrow 3 : 4 \\ \quad \downarrow \quad \downarrow \\ \quad 1 \quad 1 \\ E \rightarrow 2 : 3 \\ \quad \downarrow \quad \downarrow \\ \quad 1 \quad 1 \end{array}$$

$$\begin{array}{l} 1 \rightarrow 200 \\ 7 \rightarrow 7 \times 200 = 1400 \end{array}$$

$$\begin{array}{l} I = E + S \\ E = I - S \end{array}$$

$$\begin{array}{r} 25 \\ 100 \overline{) 75} \\ 80 \quad 65 \\ \quad 25 \end{array}$$



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Q3. Two numbers are in the ratio 3 : 5. If 9 is subtracted from each, then new numbers are in the ratio 12 : 23. The smaller number is :

- (a) 27
- ☒ (b) 33
- (c) 49
- (d) 55
- (e) None of these

$$\begin{array}{l} (3 : 5) \quad \boxed{33} : 55 \quad 33 - 9 = 24 \\ \quad \quad \quad \downarrow \quad \quad \quad \downarrow \\ \quad \quad \quad 24 : 26 \\ \quad \quad \quad \downarrow \quad \quad \quad \downarrow \\ \quad \quad \quad 12 : 13 \end{array}$$

Handwritten solution showing the process of finding the smaller number. It starts with the ratio 3:5 and the number 33. It subtracts 9 from 33 to get 24. Then it shows the ratio 24:26, which simplifies to 12:13. The final answer is 33.



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Q4. If $3A = 6B = 9C = k$, what is $A : B : C$?

(a) $6 : 3 : 1$

~~(b) $6 : 3 : 2$~~

(c) $9 : 3 : 6$

(d) $9 : 3 : 1$

(e) None of these

$$3A = k \quad B = \frac{k}{6} \quad C = \frac{k}{9}$$
$$A = \frac{k}{3}$$

$$A : B : C = \frac{1}{3} : \frac{1}{6} : \frac{1}{9}$$
$$= \frac{18}{3} : \frac{18}{6} : \frac{18}{9}$$
$$= 6 : 3 : 2$$



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Q5. There are 50^{1/2} paisa, 25^{1/2} paisa and Rs. 1^{1/2} coins in a bag in the ratio 5 : 8 : 1.

If the total value of all the coins is Rs. 55, how many 25 paisa coins are there in the bag?

(a) 10

(b) 80

(c) 50

(d) 25

(e) None of these

$$5x \rightarrow x \frac{1}{2} = \frac{5x}{2}$$

$$8x \rightarrow \frac{1}{4} = 2x$$

$$x \rightarrow 1 = x$$

$$\frac{5x}{2} + 2x + x = 55$$

$$\frac{5x}{2} + 3x = 55$$

$$\frac{11x}{2} = 55$$

$$x = 10$$

$$90 \rightarrow 2 = 20$$



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Q6. A sum of Rs. 53 is divided among Rohit, Mohit and Shobhit in such a way that Rohit gets Rs. 7 more than Mohit and Mohit gets Rs. 8 more than Shobhit. The ratio of their shares is:

(a) 16 : 9 : 18

(b) 25 : 18 : 10

(c) 18 : 25 : 10

(d) 15 : 8 : 30

(e) None of these

$$x \quad 3x \quad 2x$$

$$3x + 23 = 53$$

$$3x = 30$$

$$x = 10$$

$$25 : 18 : 10$$

$$\text{Sho} \rightarrow x$$

$$\text{Mohit} \rightarrow x + 8$$

$$\text{Rohit} \rightarrow x + 15$$



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Q7. A, B & C enter into a partnership with a total capital of Rs. 11800. A's capital is Rs. 2000 more than B's & Rs. 3000 less than C's. At the end of the year, what is B's share in the profit if the total profit is Rs. 35400?

$\frac{26}{33}$
 $\frac{59}{59}$

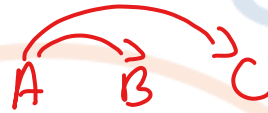
(a) Rs. 14800

(b) Rs. 6600

(c) Rs. 10800

(d) Rs. 19800

(e) Rs. 4800



$$A = x$$

$$B = x - 2000$$

$$C = x + 3000$$

$$3x + 1000 = 11800$$

$$3x = 10800$$

$$x = 3600$$

$$36 : 16 : 66$$

$$18 : 8 : 33$$

$$B = 3600 \times \frac{8}{59}$$

$$= 4800$$

$$(35400)$$

$$59 \times 6$$

$$334$$

$$\rightarrow 59 \times 10 = 590$$

$$(1-9)$$

$$9 \times 6 = 4$$



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Q8. Veer starts a business with some amount and after six months Ayush joined him with Rs. 30000. If Veer earns an annual profit of Rs. 18000 out of a total profit of Rs. 33000, then find the amount invested by Veer.

(a) 12000 Rs.

(b) 16000 Rs.

(c) 24000 Rs.

✓ (d) 18000 Rs.

(e) 20000 Rs.

$$\begin{aligned} & \frac{x \times 12}{30,000 \times 6} = \frac{18,000}{15,000} \\ & \frac{x}{2,000} = 1.2 \\ & x = 1.2 \times 2,000 = 2,400 \\ & x = 18 \times 1,000 = 18,000 \end{aligned}$$



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Q9. A, B and C enter into a partnership with shares in the ratio $7/2 : 4/3 : 6/5$. After 4 months, A increases his share by 50%. If the total profit at the end of the year was Rs 43200, then find B's share in the profit.

$$1^{st} \frac{7}{2} : \frac{4}{3} : \frac{6}{5} = 105 : 40 : 36 \quad \left(\frac{105}{2} \times 4 \right)$$

$$105 \times 12 + 105 \times 4 = 40 \times 12 : 36 \times 12$$

$$105 \times 16 : 40 \times 12 : 36 \times 12$$

$$105 \times 2 : 30 : 36$$

$$\frac{35 : 5 : 9}{5} = 43200 \times \frac{5}{49} =$$



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Q10. Ratio of present ages of Veer, Sameer, Divyaraj, Ayush and Sumit is $\underline{14 : 15 : 13 : 12 : 16}$ and sum of ages of Veer, Divyaraj & Sumit four years hence will be 44 years more than the sum of present ages of Sameer & Ayush. Find the ratio of their ages after 10 years.

(a) 19:20:18:16:21

(b) 19:20:16:17:21

(c) 19:20:22:17:21

(d) 19:20:18:17:21

(e) None of these

$$4(3x + 12) = 2(7x + 44)$$

$$16x = 32$$
$$x = 2$$

$$28 \quad 30 \quad 26 \quad 24 \quad 32$$

$$38 : 40 : 36 : 34 : 42$$

$$19 : 20 : 18 : 17 : 21$$



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Q11. Two types of ornaments are prepared using gold and copper. In the first, 6g gold is mixed with 5g copper; in the second, 5g gold is mixed with 3g copper. If total gold used is 122g and total copper is 90g, how many ornaments of the second type are prepared?

(a) 15

(b) 10

(c) 7

(d) 20

(e) 9

$$\begin{array}{r} \text{G} \quad \text{C} \\ \times 5 \quad \text{⑥} \\ 6x + 5y = 122 \end{array}$$

$$\begin{array}{r} \text{G} \quad \text{C} \\ 6x + 5y + 3y = 90 \end{array}$$

$$30x + 25y = 610$$

$$\begin{array}{r} \text{③} \quad \text{③} \quad \text{③} \\ 30x + 18y = 540 \end{array}$$

$$7y = 70$$

$$y = 10$$



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Q12. The ratio of first class fare to second class fare is 3:1. The number of tickets booked of first class to second class is in ratio 2:3. Total fare collected was Rs. 1800. Find the fare collected from second class passengers.

(a) Rs. 1200

(b) Rs. 600

(c) Rs. 900

(d) Rs. 750

(e) Rs. 450

$$\begin{array}{rcl} & \text{I} & \text{II} \\ P & 3 & : 1 \\ \times & & \end{array}$$

$$\begin{array}{rcl} Q & 2 & : 3 \\ \hline \end{array}$$

$$\begin{array}{rcl} C \rightarrow & 6 & : 3 \\ & 2 & : 1 \end{array}$$

$$1800 \times \frac{1}{3} = 600$$



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Q13. A pizza is cut into two pieces in the ratio of 3 : 7 by weight. The bigger piece is further cut in the ratio of 4 : 7 by weight. Find the ratio of the three final pieces.

(a) 11:14:7

☒ (b) 33:28:49

(c) 35:49:40

(d) 14:19:23

(e) None of these

Handwritten solution:

$$3:7 \rightarrow$$
$$33:77$$
$$28:49$$
$$33:28:49$$

Diagram showing the division of the 33:77 ratio into 33:28 and 28:49, and the 33:28 ratio into 33:14 and 14:14, which are then simplified to 33:14:7.



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Q14. A, B & C entered a partnership with capital in the ratio 5 : 8 : 12.

After 8 months C withdraws his capital while after 10 months B increases his investment by 25%. If, at the end of the year, the difference between profit shares of A and B is Rs.17000, find profit share of C.

✓ (a) Rs.40800

(b) Rs.46200

(c) Rs.32400

(d) Rs.50400

(e) Rs.38000

$$5 \times 12 : 8 \times 12 + 2 \times 2 : 12 \times 8$$

$$\begin{array}{r} 5 \times 12 : 8 \times 12 + 2 \times 2 : 12 \times 8 \\ \hline 60 : 100 : 96 \\ \hline 60 : 100 : 96 \end{array}$$

$$15 : 25 = 3 : 5$$

$$10 \rightarrow 17,000$$

$$24 \rightarrow 24 \times 17,000$$

$$\begin{array}{r} 24 \\ 17 \\ \hline 168 \\ 27 \end{array} \quad 408$$



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Q15. Ankit and Pankaj invested Rs. 3000 and Rs 5000 for 12 months and 8 months respectively. If they donate 71% of their profit and distribute the remainder in the ratio of their investment $\times$ time, find Pankaj's share out of Rs. 1900 (~~the remaining amount~~).

(a) Rs. 190

(b) ~~Rs. 290~~

(c) Rs. 280

(d) Rs. 211

(e) Rs. 191

$$\begin{array}{c} \text{A} \quad \text{P} \\ 3 \quad 5 \\ 12 \quad 8 \\ \hline 3 \times 12 : 5 \times 8 \end{array}$$

$$\boxed{9:10} \rightarrow$$

$$19 \rightarrow \cancel{1900}$$

$$10 \rightarrow \underline{1000}$$

$$\left(1900 \times \frac{29}{100}\right) \times \frac{10}{19} = 290$$



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Q16. A and B invested Rs 5000 and Rs. 9000 for 12 months and 6 months respectively. Find the profit share of B is how much percent more or less than the profit share of A.

(a) 10% less

(b) 11.11% more

(c) 11.11% less

(d) 10% more

(e) 12.5% more

$$\begin{aligned} & 5 \times \frac{2}{12} : 9 \times \frac{1}{6} \\ & 10 : 9 \\ & \quad \swarrow \\ & \quad \quad \% = \frac{1}{10} \times 100 \\ & \quad \quad = 10\% \end{aligned}$$



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Q17. A, B and C invested capital in the ratio $5 : 6 : 8$. At the end of the business term, they received profits in the ratio $5 : 3 : 12$. Find the ratio of time for which they contributed their capital.

$$P = I \times T$$

$$I = \frac{P}{T}$$

$$T = \frac{P}{I}$$

$$\frac{5}{5} : \frac{3}{6} : \frac{12}{8} = 1 : \frac{1}{2} : \frac{3}{2}$$
$$= 2 : 1 : 3$$



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Q18. A and B invested in the ratio of 3:2 respectively. They both invested for 6 months. If total profit is Rs. 5000, find the profit share of B.

(a) 2000 Rs.

(b) 2500 Rs.

(c) 2400 Rs.

(d) 3000 Rs.

(e) 1500 Rs.

$$5000 \times \frac{2}{5}$$



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Q19. A, B & C entered into a partnership business. The amount invested by B is 3 times that of A, and the ratio of amount invested by C to that of B is 1 : 2. After 11 months, all three withdrew Rs. Y. If the ratio of C's profit share to total profit at year end is 35 : 129, find the profit sharing ratio of A to B at year end.

(a) 19:75

(b) 41:53

(c) 67:27

✓ (d) 23:71

(e) 31:63

$$A:B = 1:3 \times 2 \quad A:B:C = 2:6:3$$

$$C:B = 1:2 \times 3$$

$$22 + 1 : 66 + 5 \quad 11 \times 3 \quad 33 + (3 - 1)$$

$$23 : 71 : 35 \rightarrow | \underline{129}$$



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Q20. Three friends P, Q and R share an apartment and rent equally. The monthly income of R is 25% less than Q and Rs.8000 less than P. Monthly expenditure of Q on food is Rs.1000 more than P and Rs.1000 less than R. If the total amount spent by all three on food is Rs.27000 and Q's monthly income is Rs.6000 more than P's, find the monthly rent of the apartment.

(a) Rs.48000

(b) Rs.30000

(c) Rs.24000

(d) Rs.36000

(e) Cannot be determined

$$R:Q = 3:4$$

$$P = 3x + 8000$$

$$Q = 3x + 14k$$

$$4x = 3x + 14k$$

$$x = 14k$$

$$Q = 3a$$

$$P = a - 1000$$

$$Q = a + 1000$$

$$14x = 56k$$

$$= 45000$$

$$3a = 27$$

$$a = 9000$$



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PRACTICE QUESTIONS

Q1. If 33% of A is equal to 55% of B then find the ratio of A and B.

- (a) 3 : 5
- (b) 5 : 3
- (c) 3 : 4
- (d) 5 : 4
- (e) None of these

Q2. A sum of money is to be distributed among A, B, C, D in the proportion of 5 : 2 : 4 : 3. If C gets Rs. 1000 more than D, what is B's share?

- (a) Rs. 500
- (b) Rs. 1500
- (c) Rs. 2000
- (d) Rs. 2400
- (e) None of these

Q3. In an office of 1200 employees, the ratio of urban to rural staff is 8 : 7. After some new employees join (of which 20 are rural), the ratio becomes 5 : 4. Find the number of new urban employees.

- (a) 100
- (b) 85
- (c) 76
- (d) 108
- (e) None of these

Q4. Sunil invested Rs.($x+2000$) and Anil invested Rs.($x+3000$) in a partnership. If the profit at year end is Rs.48000 and Anil's share is Rs.28000, find the value of x .

- (a) 500
- (b) 400
- (c) 600
- (d) 800
- (e) 1000

Q5. Varun and Kartik purchased shares in ratio 7:9 for the cost of their basic salaries. The company gave each of them 50 shares as incentive, changing the ratio to 9:11. If each share costs Rs. 60, find the basic salary of Varun.

- (a) Rs. 13500
- (b) Rs. 16500
- (c) Rs. 21000



(d) Rs. 10500

(e) Rs. 27000

ENGLISH PRACTICE

Q1. In the following questions, three sentences are given each indicating a missing word. Choose the most appropriate word from the options given below which fits all the blanks correctly, changing its form as grammatically and contextually required.

I). The technical committee was set up to _____ the structural integrity of the bridge after the flash floods.

II). The taxation department will thoroughly _____ the financial statements of the startup for any discrepancies.

III). The invigilator walked down the aisles to _____ the candidate verification documents and hall tickets.

- a. overlook
- b. analyze
- c. observe
- d. scrutinize
- e. audit



Q2. I). The lead actor's powerful performance did _____ a standing ovation from the notoriously critical opening-night audience.

II). Investigative journalists often uncover confidential memos that _____ sharp criticism from corporate governance panels.

III). Complex tax codes frequently _____ confusion among small business owners who cannot afford dedicated accounting teams.

- a. elicit
- b. cause
- c. provoke
- d. generate
- e. extract

Q3. I). The filtration system works by _____ impurities from water, making it safe for drinking and daily use.

II). To prevent burnout, clinical psychologists advise working professionals to practice _____ their personal lives from their high-stress careers.

III). Teachers are _____ students into groups based on performance levels for more effective classroom learning activities.

- a. disconnecting
- b. detaching
- c. isolating
- d. dividing

e. separating

Q4. I). The nurse kept a _____ hand while administering the injection to avoid causing unnecessary pain to the patient.

II). The economy showed _____ growth over the past five years, reflecting improved industrial and service performance.

III). He spoke in a calm and _____ voice during the interview, despite facing difficult and unexpected questions.

- a. steady
- b. strong
- c. heavy
- d. force
- e. power

Q5. I). The historical drama series was highly praised for its visually stunning and historically _____ costumes.

II). The automated accounting software ensures that all tax computations are perfectly _____ and compliant with current laws.

III). _____ translation of legal documents is essential to prevent misunderstandings in international business agreements and contracts.

- a. correct
- b. right

- c. accurate
- d. detailed
- e. present

Q6. In each of the following questions, a sentence divided into four parts. One of these parts may contain an error. Choose the incorrect part as your answer. If the given sentence is correct, mark option (e) as your answer.

Local homestays in high-altitude Himalayan villages (A)/ offer international visitors an authentic (B)/ taste of traditional hospitality while (C)/ boost the sustainable rural economy significantly. (D)

- a. A
- b. B
- c. C
- d. D
- e. No error

Q7. Public health campaigns focusing on prevention (A)/ lifestyle modifications have proven (B)/ to be incredibly effective at reducing (C)/ the long-term burden of chronic diseases. (D)

- a. A
- b. B
- c. C

- d. D
- e. No error

Q8. Verifying your account credentials through (A)/ two-factor authentication adds an (B)/ essential layer of security (C)/ against sophisticatedly online phishing attempts. (D)

- a. A
- b. B
- c. C
- d. D
- e. No error

Q9. The discovery of liquid water oceans (A)/ beneath the icy crusts of distant moons (B)/ has been fundamentally shifted our (C)/ search for extraterrestrial life forms. (D)

- a. A
- b. B
- c. C
- d. D
- e. No error



Q10. Developing affordable, portable diagnostic devices (A)/ is crucial for improving healthcare delivery (B)/ in underserved rural areas where (C)/ formal medical infrastructure is severely lacking. (D)

- a. A
- b. B
- c. C
- d. D
- e. No error

