IBPS RRB Clerk Pre 2025 Memory Based Paper Based on 7th December 1st Shift

Directions (1-5): Read the given information carefully and answer the related question:
Eight persons A, B, C, D, E, F, G and H sit around a square table but not in same order as given. Four persons sit at corner of the table facing inside and three sits at the middle of each side facing outside. Two persons sit between A and B. B faces inside. F sits immediate right of A. D sits adjacent to F and G. C sits second to the right of H.

Q1. What is the position of C with respect to F?
(a) Fourth to the left
(b) Second to the left
(c) Third to the left
(d) Immediate right
(e) Third to the right

Q2. How many persons sit between E and H (when counted from the right of H)?
(a) Three
(b) None
(c) Two
(d) Four
(e) One

Q3. Who among the following sits immediate left of G?
(a) A
(b) F
(c) B
(d) H
(e) C

Q4. Four of the following five are similar in a certain manner and form a group, who among the following is not related to the group?
(a) E
(b) B
(c) G
(d) D
(e) F

Q5. If all the persons are asked to sit in alphabetical order, starting from A, in clockwise direction, then how many persons will remain same on their position (excluding A)?
(a) Two
(b) None
(c) Three
(d) One
(e) Four

Directions (6-10): Read the given information carefully and answer the related question:
In a certain code language:
"Apple farmers supply fruits" is coded as 'kl zu rt mw'
"Fresh mango supply today" is coded as 'rt ds pq ne'
"Farmers sell apple today" is coded as 'zu kl ne tx'
"Mango fruits taste sweet" is coded as 'ds mw jy ab'

Q6. What is the code for 'sell'?
(a) tx
(b) kl
(c) ab
(d) zu
(e) ne

Q7. What will be the code for 'fruits supply'?
(a) mw ab
(b) ds tx
(c) mw rt
(d) jy rt
(e) ne tx

Q8. Which of the following word is coded as 'kl'?
(a) Sell
(b) Today
(c) Farmers
(d) Apple
(e) Can't be determined

Q9. If 'sweet corn' is coded as 'jy hm', then what will be the code for 'Taste'?
(a) st
(b) mw
(c) ds
(d) ab
(e) Can't be determined

Q10. What may be the code for 'mango juice today'?
(a) ds jy ne
(b) ds op ne
(c) rt op ne
(d) ds op pq
(e) mw tx ab

Directions (11-13): In the question below, relation between some elements is shown in the statements, followed by two conclusions. Read it carefully and choose which conclusion is true as per the statement.
(a) If only conclusion I is true
(b) If only conclusion II is true
(c) If either conclusion I or II is true
(d) If both conclusion I and II are true
(e) If neither conclusion I nor II is true

Q11. Statements: K > R ≥ T = W < J ≤ B = F
Conclusions:
I. R < J
II. T ≥ F

Q12. Statements: Z ≥ K < P = V ≤ R ≤ T < Y
Conclusions:
I. K < Y
II. Z > R

Q13. Statements: H = X ≤ L ≤ D < U = S < N
Conclusions:
I. L < N
II. D ≥ H

Q14. How many pairs of letters are in the word '**MISTAKE**', each of which have as many letters between them as they have between them according to English alphabetical order? (both forward and backward direction)
(a) One
(b) Two
(c) Three
(d) Four
(e) None

Directions (15-19): Read the given information carefully and answer the related question:
Seven boxes A, B, C, D, E, F and G are placed one above the other in a stack, but not in same order as given.
Four boxes are placed between box G and box B. Box D is placed two boxes above box B. Box A is placed immediately below box D. Box C is placed two boxes above box F.

Q15. Which box is placed third from the topmost position?
(a) Box F
(b) Box C
(c) Box D
(d) Box E
(e) Box A

Q16. How many boxes are placed below box D?
(a) One
(b) Two
(c) Three
(d) Four
(e) Five

Q17. If all the boxes are rearranged in alphabetical order from bottom to top, then how many boxes will remain same at their position?
(a) One
(b) Four
(c) Three
(d) Two
(e) None

Q18. If box C is related to box G, in the similar way box F is related to box E, then which box is related to box B?
(a) Box C
(b) Box D
(c) Box A
(d) Box F
(e) Box E

Q19. Which box is placed immediately below box E?
(a) Box A
(b) Box G
(c) Box B
(d) Box D
(e) Box F

Q20. Find the odd one out.
(a) PSV
(b) EHK
(c) ILN
(d) MPS
(e) RUX

Directions (21-22): Study the following information carefully and answer the questions given below:
Point K is 11m north of point B, which is 12m east of point O. Point C is 13m south of point B. Point H is 24m south of point D. Point C is 11m west of point H and 5m east of point S. Point D is 2m east of Point A.

Q21. Four of the following five are alike in a certain way and thus form a group. Find the one pair of points which does NOT belong to the group?
(a) K-O
(b) B-S
(c) D-C
(d) K-H
(e) D-O

Q22. In which direction is point K with respect to point A?
(a) North-west
(b) South-east
(c) West
(d) North-east
(e) East

Directions (23-26): In each question below, some statements are given followed by two conclusions numbered I and II. Assume the statements are true even if they contradict commonly known facts. Decide which conclusion logically follows.
(a) Only conclusion I follows
(b) Only conclusion II follows
(c) Either conclusion I or II follows
(d) Neither conclusion I nor II follows
(e) Both conclusions I and II follow

Q23. Statements:
Some play are games
Only a few games are indoor
Conclusions:
I. Some games are not indoor
II. All play is indoor

Q24. Statements:
All apple are fruits
Some fruits are not banana
Conclusions:
I. Some banana is definitely not apples
II. No fruits are banana

Q25. Statements:
No pattern is visual
Only a few cluster is visual
Conclusions:
I. Some pattern is cluster
II. No pattern is cluster

Q26. Statements:
Only a few river is blue
Some blue is ocean
No ocean is pond
Conclusions:
I. Some blue is not pond
II. No river being pond is a possibility

Directions (27-29): Read the given information carefully and answer the related questions:
Six pencils A, B, C, D, E and F are of different length (in cm). Two pencils are longer than B. One pencil is in between B and C. E is just shorter than C which is not the longest pencil. F is longer than A but shorter than D. The third longest pencil is of 7cm.

Q27. Which of the following pencil is 2nd shortest?
(a) C
(b) F
(c) E
(d) D
(e) A

Q28. How many pencils are longer than A?
(a) Two
(b) Three
(c) Four
(d) Five
(e) None

Q29. If total length of pencil D and B is 16 cm, then what will be the possible height of pencil F?
(a) 11 cm
(b) 10 cm
(c) 9 cm
(d) 8 cm
(e) None of the above

Q30. If it is possible to make a four-letter meaningful word with the 2nd, 4th, 7th and 8th letter (from left) of the word '**ALTERNATES**', which would be the second letter of the word from left? If more than one such meaningful word can be formed then give 'Z' as your answer. If no such meaningful word can be formed, give 'Y' as your answer.
(a) E
(b) T
(c) L
(d) Z
(e) Y

Directions (31-35): Read the given word-series carefully and answer the related question:
WIN KEY JAM LOG CAT

Q31. If all the words are arranged in dictionary order from left, then which word will become 3rd from the right end?
(a) KEY
(b) LOG
(c) CAT
(d) WIN
(e) JAM

Q32. If 3rd letter is changed to its next letter as per alphabetical series, then how many words will have more than one vowel?
(a) None
(b) One
(c) Three
(d) Four
(e) Two

Q33. If letter 'D' is added at the end of each word, then how many meaningful words will be formed?
(a) Two
(b) None
(c) One
(d) Four
(e) Three

Q34. How many letters are between 'first letter of second word from left end' and 'third letter of third word from right end', as per English alphabet?
(a) Seven
(b) One
(c) Two
(d) Ten
(e) Three

Q35. If all letters are arranged in dictionary order from left within each word, then how many words will start with vowel?
(a) One
(b) Three
(c) Four
(d) Five
(e) Two

Directions (36-40): Read the given information carefully and answer the related questions:
Six persons B, C, D, E, F and G were born (but not in same order as given) on different days of a week starting from Monday to Saturday.
B was born after Thursday. Three persons were born between B and F. Number of persons born before F is same as the number of persons born after C. One person was born between D and E. G was born immediately before E.

Q36. G was born on which of the following day?
(a) Friday
(b) Wednesday
(c) Monday
(d) Tuesday
(e) Thursday

Q37. Who among the following was born on Saturday?
(a) F
(b) D
(c) E
(d) B
(e) C

Q38. Which of the following combination is correct?
(a) B – Saturday
(b) D - Thursday
(c) C - Friday
(d) F – Monday
(e) G - Tuesday

Q39. How many persons were born before E?
(a) Four
(b) None
(c) Three
(d) One
(e) Two

Q40. Which of the following statement is correct?
I. One person was born between F and G
II. E was born on Thursday
III. D was born before F
(a) Only II
(b) Only I and II
(c) Only I and III
(d) Only I
(e) Only III

Q41. A mixture contains milk and water in the ratio 2 : 1. The total quantity of the mixture is 30 liters. If x liters of water are added to the mixture, the ratio of milk to water becomes 2 : 3. Find the value of x.

(a) 10
(b) 20
(c) 30
(d) 15
(e) 5

Q42. P and Q started a business by investing Rs. 8,000 and Rs. 6,000 respectively. After x months, Q withdrew his investment. At the end of the year, Q's share of profit was Rs. 2,000 out of a total profit of Rs. 6,000. Find the value of x.

(a) 8
(b) 9
(c) 6
(d) 4
(e) 5

Q43. The present ages of A and B are in the ratio 4 : 3 respectively. Three years ago, the ratio of their ages was 7 : 5. Find the age of A after 4 years from now (in years).

(a) 20
(b) 25
(c) 32
(d) 24
(e) 28

Q44. The principal amount is Rs. 8,000, and the rate of interest is 10% per annum. If the simple interest earned is Rs. 2,000, find the time period (in years).

(a) 4.5
(b) 4
(c) 2
(d) 2.5
(e) 3

Q45. The downstream speed of a boat is 18 km/h, and the speed of the stream is 3 km/h. Find the time taken (in hours) by the boat to cover a distance of 30 km upstream.

(a) 3.5
(b) 2
(c) 2.5
(d) 4.5
(e) 4

Q46. A train of length 180 meters crosses a pole in 9 seconds. Find the time taken (in seconds) by the train to cross a bridge of length 270 meters.

(a) 18.5
(b) 20
(c) 22.5
(d) 14.5
(e) 15.5

Q47. A man spends 25% of his monthly salary on rent. Out of the remaining amount, he spends 15% on clothes, and after that, he spends 20% on travelling. He saves the rest. If his savings amount to Rs. 6,120, find his monthly salary (in Rs).

(a) 17500
(b) 10000
(c) 11500
(d) 14000
(e) 12000

Q48. A man invested Rs. P at a rate of 20% per annum compounded annually for 2 years. If the amount at the end of 2 years is Rs. 10,800, find the amount he invested (in Rs).

(a) 7500
(b) 8000
(c) 8500
(d) 9000
(e) 45000

Q49. A shopkeeper marks up the price of an article by 40% above its cost price and allows a 10% discount on the marked price. If he earns a profit of Rs. 104 on the article, find the cost price of the article (in Rs).

(a) 100
(b) 200
(c) 400
(d) 600
(e) 500

Q50. A and B together can complete a piece of work in 12 days, and A alone can complete it in 20 days. Find the time taken (in days) by B alone to complete 60% of the work.

(a) 15
(b) 14
(c) 18
(d) 16
(e) 20

Directions (51-55): Find out the wrong number.

Q51. 34, 15, 15, 22.5, 45, 112.5, 337.5
(a) 34
(b) 15
(c) 22.5
(d) 45
(e) 112.5

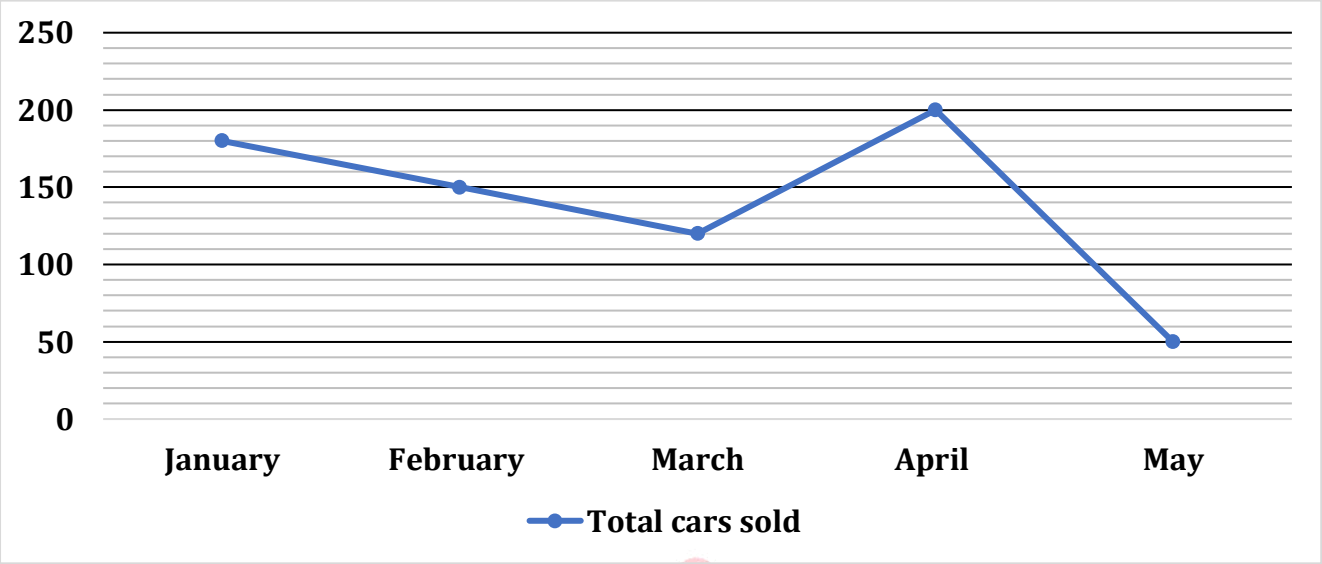
Q52. 56, 60, 71, 91, 131, 211, 371
(a) 56
(b) 60
(c) 71
(d) 91
(e) 211

Q53. 105, 108, 111, 114, 117, 120, 122
(a) 105
(b) 114
(c) 122
(d) 111
(e) 117

Q54. 201, 199, 206, 190, 215, 179, 228
(a) 228
(b) 215
(c) 199
(d) 201
(e) 190

Q55. 6, 12, 28, 59, 120, 241
(a) 120
(b) 241
(c) 12
(d) 6
(e) 28

Directions (56-60): Read the following line graph carefully and answer the questions given below. The line graph shows the total number of cars sold by a company in five different months.



Q56. Find the average number of cars sold in these five months.
(a) 110
(b) 150
(c) 130
(d) 120
(e) 140

Q57. The number of cars sold in February is what percent of the total cars sold in April?
(a) 75%
(b) 60%
(c) 25%
(d) 55%
(e) 87.5%

Q58. Find the difference between the total cars sold in January and that of March.
(a) 60
(b) 90
(c) 70
(d) 50
(e) 100

Q59. What is the ratio of total cars sold in January and March together to the cars sold in February and May together?
(a) 3:1
(b) 2:3
(c) 3:2
(d) 1:3
(e) 4:3

Q60. Find the sum of the total cars sold in May and February together.
(a) 300
(b) 330
(c) 200
(d) 380
(e) 370

Directions (61-65): Read the following table carefully and answer the questions given below. The table shows the total number of blue balls and total number of green balls in five different bags.

Bags	Blue balls	Green balls
A	210	170
B	520	330
C	480	260
D	360	650
E	300	260

Q61. Find the total number of blue balls in all the bags together.
(a) 1870
(b) 1630
(c) 1240
(d) 1390
(e) 1550

Q62. What is the average number of green balls in all five bags?
(a) 334
(b) 338
(c) 342
(d) 346
(e) 362

Q63. The number of blue balls in Bag A is what percent of the total blue balls in Bag B (approx.)?
(a) 20%
(b) 35%
(c) 45%
(d) 40%
(e) 25%

Q64. Find the difference between the total number of green balls in Bag D and Bag A together and the total number of blue balls in Bag C and E together.
(a) 60
(b) 20
(c) 30
(d) 50
(e) 40

Q65. If the total number of pink balls in bag C is 20% less than the total number of green balls in bag D, then find the total number of pink balls in bag C.
(a) 480
(b) 520
(c) 500
(d) 570
(e) 410

Directions (66–80): What should come in place of question mark (?) in the following questions?

Q66. 4769 – (3267 + 2425 – 961) = ?
(a) 35
(b) 48
(c) 43
(d) 38
(e) 47

Q67. 1217 + 841 – 724 + 819 = ? + 1843
(a) 210
(b) 310
(c) 360
(d) 270
(e) 410

Q68. 0.06 × 0.84 = ? × 1.2 × 0.015
(a) 8.2
(b) 6.4
(c) 2.6
(d) 3.8
(e) 2.8

Q69. 8.41 + 6.25 + 0.79 = ? – 0.55
(a) 17
(b) 14.9
(c) 13.9
(d) 16
(e) 14.7

Q70. 616 + 472 – 811 + 317 = ? + 576
(a) 28
(b) 16
(c) 24
(d) 18
(e) 14

Q71. 12.5 × 80 + 37.5 × 16 – 6.25 × 112 = ?
(a) 1000
(b) 900
(c) 2300
(d) 600
(e) 1300

Q72. $\sqrt{3025} - \sqrt{2116} = ?^2$
(a) 81
(b) 9
(c) 3
(d) 27
(e) 729

Q73. $\sqrt{?} + \sqrt{324} + \sqrt{361} = \frac{1}{5}^{th}$ of 290
(a) 400
(b) 441
(c) 361
(d) 484
(e) 289

Q74. 1674 ÷ 27 × 9 + 18 = $?^2$
(a) 26
(b) 23
(c) 24
(d) 35
(e) 18

Q75. $(1.2)^2 + (1.5)^2 + (2.1)^2 - (1.9)^2 = ?$
(a) 4.99
(b) 5.69
(c) 3.69
(d) 6.79
(e) 4.49

Q76. $\sqrt{484} \div \frac{11^2}{8} + ? = \frac{38}{11}$
(a) 22
(b) 2
(c) 1
(d) 11
(e) 4

Q77. $\frac{(12+44)}{8} \times 28 = ?^2$

(a) 13
(b) 16
(c) 17
(d) 14
(e) 19

Q78. $\frac{32}{35} \div \frac{1}{5} \times \frac{7}{8} \div \frac{2}{35} = ?$

(a) 60
(b) 80
(c) 75
(d) 90
(e) 70

Q79. $\frac{15}{100} \times \frac{200}{700} \times ? = 240$

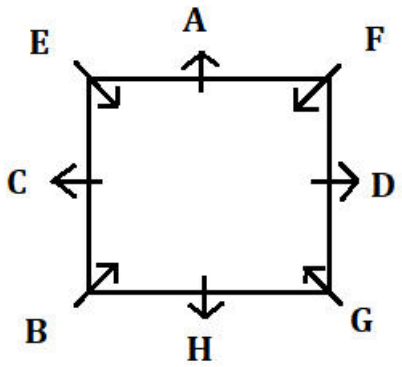
(a) 5800
(b) 6300
(c) 6100
(d) 5600
(e) 5300

Q80. $23 \div 48 \times 576 = ? \times \frac{3}{2}$

(a) 148
(b) 194
(c) 176
(d) 154
(e) 184

Solutions

Solutions (1-5):



S1. Ans.(e)
S2. Ans.(c)
S3. Ans.(d)
S4. Ans.(d)
S5. Ans.(b)

Solutions (6-10):

Words	Codes
Mango	ds
Fruits	mw
Farmers/Apple	zu/ kl
Supply	rt
Today	ne
Fresh	pq
Sell	tx
Taste/ Sweet	jy/ ab

S6. Ans.(a)
S7. Ans.(c)
S8. Ans.(e)
S9. Ans.(d)
S10. Ans.(b)

S11. Ans.(e)
Sol. I. R < J (False)
II. T ≥ F (False)

S12. Ans.(a)
Sol. I. K < Y (True)
II. Z > R (False)

S13. Ans.(d)
Sol. I. L < N (True)
II. D ≥ H (True)

S14. Ans.(a)
Sol.

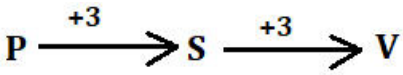
MISTAKE

Solutions (15-19):

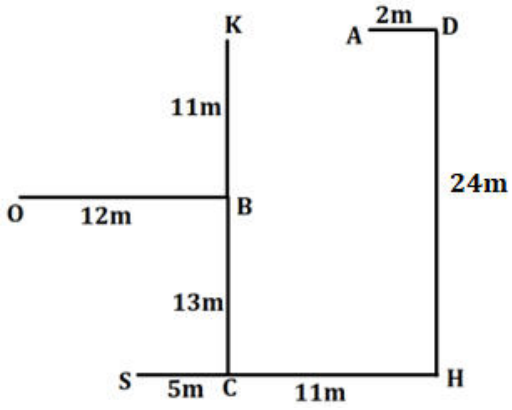
Boxes
C
G
F
E
D
A
B

S15. Ans.(a)
S16. Ans.(b)
S17. Ans.(e)
S18. Ans.(c)
S19. Ans.(d)

S20. Ans.(c)
Sol. The logic is:



Solutions (21-22):

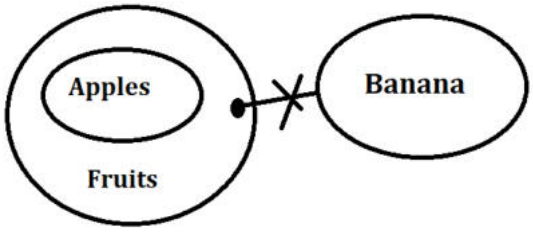


S21. Ans.(d)
Sol. Except K-H, first point is to the north-east of the second point.

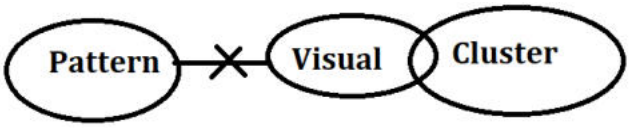
S22. Ans.(c)

S23. Ans.(a)
Sol.

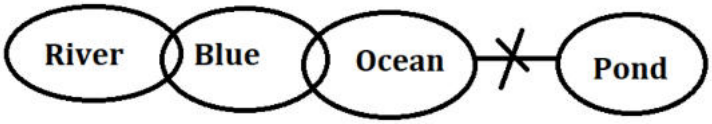
S24. Ans.(d)
Sol.



S25. Ans.(c)
Sol.



S26. Ans.(e)
Sol.



Solutions (27-29):
D > F > B (7 cm) > A > C > E

S27. Ans.(a)
S28. Ans.(b)
S29. Ans.(d)

S30. Ans.(d)
Sol. LATE, TALE, TEAL

S31. Ans.(a)
S32. Ans.(e)
S33. Ans.(c)
S34. Ans.(b)
S35. Ans.(c)

Solutions (36-40):

Days	Persons
Monday	F
Tuesday	D
Wednesday	G
Thursday	E
Friday	B
Saturday	C

S36. Ans.(b)
S37. Ans.(e)
S38. Ans.(d)
S39. Ans.(c)
S40. Ans.(b)

S41. Ans.(b)
Sol. Information Given in the Question:
Initial ratio of milk to water = 2 : 1
Total quantity of mixture = 30 liters
Water added = x liters
New ratio of milk to water = 2 : 3
Detailed Explanation:
Milk = $\frac{2}{3} \times 30 = 20$liters
Water = $\frac{1}{3} \times 30 = 10$liters
Water added = x liters
So, new water quantity = $10 + x$ liters
According to the question,
$\frac{20}{10+x} = \frac{2}{3}$
$3 \times 20 = 2 \times (10 + x) \Rightarrow 60 = 20 + 2x$
$60 - 20 = 2x$
$40 = 2x$
$x = 20$

S42. Ans.(a)
Sol. Information Given in the Question:
P's investment = Rs. 8,000 (for full 12 months)
Q's investment = Rs. 6,000 (for x months)
Total profit = Rs. 6,000
Q's profit share = Rs. 2,000
P's profit share = Rs. 6,000 - 2,000 = Rs. 4,000
Concept/Formula Used in the Question:
Profit is distributed in the ratio of **investment × time**
Detailed Explanation:
P's investment for 12 months = $8000 \times 12 = 96000$
Q's investment for x months = $6000 \times x = 6000x$
Profit ratio = P : Q = 96000 : 6000x
Given:
Q's share = 2000 and total = 6000
So ratio = 4000 : 2000 = 2 : 1

Now equate:
$\frac{96000}{6000x} = \frac{2}{1}$
$96000 = 12000x$
$x = \frac{96000}{12000}$
$x = 8$

S43. Ans.(e)
Sol. Information Given in the Question:
Present age ratio of A : B = 4 : 3
3 years ago, their age ratio = 7 : 5
Find A's age 4 years from now
Detailed Explanation:
Let present ages be:
A = 4x
B = 3x
Three years ago:
A's age = 4x - 3
B's age = 3x - 3
According to the question:
$\frac{4x-3}{3x-3} = \frac{7}{5}$
$5(4x - 3) = 7(3x - 3)$
$20x - 15 = 21x - 21$
$21x - 20x = 21 - 15 \Rightarrow x = 6$
So, A's present age = $4x = 24$
A's age after 4 years = $24 + 4 = 28$ years

S44. Ans.(d)
Sol. Information Given in the Question:
Principal (P) = Rs. 8000
Rate of interest (R) = 10% per annum
Simple Interest (SI) = Rs. 2000
Need to find Time (T) in years
Concept/Formula Used in the Question:
Simple Interest (SI) $= \frac{P \times R \times T}{100}$
$T = \frac{SI \times 100}{P \times R}$
Detailed Explanation:
Given:
SI = 2000
P = 8000
R = 10%

Let time period be T
Substitute in formula:
$T = \frac{2000 \times 100}{8000 \times 10}$
$T = \frac{200000}{80000}$
$T = 2.5$ years

S45. Ans.(c)
Sol. Information Given in the Question:
Downstream speed = 18 km/h
Speed of the stream = 3 km/h
Distance to cover upstream = 30 km
Concept/Formula Used in the Question:
Speed of boat in still water = (Downstream speed - Stream speed)
Upstream speed = (Speed of boat - Stream speed)
Time = Distance / Speed
Detailed Explanation:
Speed of boat in still water = 18 - 3 = 15 km/h
Upstream speed = 15 - 3 = 12 km/h
Time taken = Distance / Upstream speed
$= \frac{30}{12} = 2.5$ hours

S46. Ans.(c)
Sol. Information Given in the Question:
Length of train = 180 meters
Time to cross a pole = 9 seconds
Length of bridge = 270 meters
Concept/Formula Used in the Question:
Speed = Distance / Time
When crossing a pole → Distance = length of train
When crossing a bridge → Distance = length of train + length of bridge
Time = Total Distance / Speed
Detailed Explanation:
Speed of train = $\frac{180}{9} = 20$m/s
Total distance to cross bridge = 180 + 270 = 450 meters
Time = $\frac{450}{20} = 22.5$ seconds

S47. Ans.(e)
Sol. Given:
He spends money in the following sequence:
Rent = 25% of salary
Clothes = 15% of the remaining
Travelling = 20% of the remaining
Saves = Rs. 6,120

Detailed Explanation:

Let monthly salary be Rs x.

After rent → remaining = 75% of x = 0.75x

After clothes → spends 15% of remaining, so keeps 85% of that:

Remaining $= 0.75x \times 0.85 = 0.6375x$

After travelling → spends 20% of remaining, so keeps 80% of that:

Remaining (savings) $= 0.6375x \times 0.80 = 0.51x$

Savings = 0.51x = 6,120

$x = \frac{6120}{0.51} = 12{,}000$

S48. Ans.(a)

Sol. Information Given in the Question:

Time = 2 years

Rate of interest = 20% per annum (compounded annually)

Amount after 2 years = Rs. 10,800

Principal (P) = ?

Concept/Formula Used in the Question:

Compound Interest Formula = A – P

$A = P \times (1 + \frac{R}{100})^T$

Where:

A= Final Amount

P= Principal

R= Rate of Interest

T= Time in years

Detailed Explanation:

We are given:

$A = 10{,}800, R = 20\%, T = 2\text{years}$

Using the compound interest formula:

$10{,}800 = P \times (1 + \frac{20}{100})^2$

$10800 = P \times (1.2)^2$

$10800 = P \times 1.44$

Now,

$P = \frac{10{,}800}{1.44} = 7500$

S49. Ans.(c)

Sol. Information Given in the Question:

Marked up by 40% over Cost Price

Discount given = 10%

Profit earned = Rs. 104

Cost Price (CP) = ?

Concept/Formula Used in the Question:
Marked Price (MP) = CP × (1 + Markup%)
Selling Price (SP) = MP × (1 - Discount%)
Profit = SP - CP
Detailed Explanation:
Let the cost price be x.
Then,
Marked Price = x × 1.40 = 1.4x
Selling Price = 1.4x × 0.90 = 1.26x
Profit = SP - CP = 1.26x - x = 0.26x
Now,
0.26x = 104
x = 104 / 0.26 = Rs. 400

S50. Ans.(c)
Sol. Information Given in the Question:
A and B together complete the work in 12 days
A alone completes the work in 20 days
Find time taken by B alone to complete 60% of the work
Concept/Formula Used in the Question:
Use LCM method: Assume total work = LCM of given days
Work per day = Total work ÷ Days
Time = Work ÷ Rate
Required: Time taken by B to complete 60% of total work
Detailed Explanation:
Let the total work = LCM of 12 and 20 = 60 units
Efficiency of A and B together = 60 ÷ 12 = 5 units/day
Efficiency of A = 60 ÷ 20 = 3 units/day
Efficiency of B = 5 - 3 = 2 units/day
Now, 60% of the total work = 60% of 60 = 36 units
Time taken by B = 36 ÷ 2 = 18 days

S51. Ans.(a)
Sol.
The pattern of the series:

30,	15,	15,	22.5,	45,	112.5,	337.5
	× 0.5	× 1	× 1.5	× 2	× 2.5	× 3

S52. Ans.(b)
Sol. The pattern of the series:

56,	**61**,	71,	91,	131,	211,	371
	5	10	20	40	80	160

S53. Ans.(c)
Sol. The pattern of the series:

105, 108, 111, 114, 117, 120, **123**

3 3 3 3 3 3

S54. Ans.(c)
Sol. The pattern of the series:

201, **197**, 206, 190, 215, 179, 228

-4 +9 -16 +25 -36 +49

S55. Ans.(d)
Sol. The pattern of the series:

3.5, 12, 28, 59, 120, 241

$\times 2+5$ $\times 2+4$ $\times 2+3$ $\times 2+2$ $\times 2+1$

S56. Ans.(e)
Sol. Required average = $\frac{180+150+120+200+50}{5} = 140$

S57. Ans.(a)
Sol. Required percentage = $\frac{150}{200} \times 100 = 75\%$

S58. Ans.(a)
Sol. Required difference = 180 – 120 = 60

S59. Ans.(c)
Sol. Required ratio = (180 + 120) : (150 + 50)
= 300 : 200
= 3:2

S60. Ans.(c)
Sol. Required sum = 50 + 150 = 200

S61. Ans.(a)
Sol. Required answer = 210 + 520 + 480 + 360 + 300 = 1870

S62. Ans.(a)
Sol. Required answer = $\frac{170+330+260+650+260}{5} = 334$

S63. Ans.(d)
Sol. Required percentage = $\frac{210}{520} \times 100 = 40.3\% = 40\%$ (apporx)

S64. Ans.(e)
Sol. Required difference = (650 + 170) – (480 + 300)
= 820 – 780
= 40

S65. Ans.(b)
Sol. Required answer = $650 \times \frac{80}{100} = 520$

S66. Ans.(d)
Sol. 4769–4731=?
? = 38

S67. Ans.(b)
Sol. ? = 1217 + 841 + 819 – 724 – 1843
= 2877 – 2567
? = 310

S68. Ans.(e)
Sol. $? = \frac{0.06 \times 0.84}{1.2 \times 0.015}$
? = 2.8

S69. Ans.(d)
Sol. ?= 15.45 + 0.55
? = 16

S70. Ans.(d)
Sol. ? = 1405 – 811 – 576
? = 18

S71. Ans.(b)
Sol. $\frac{100}{8} \times 80 + \frac{300}{8} \times 16 - \frac{100}{16} \times 112 = ?$
$? = 1000 + 600 - 700$
?= 900

S72. Ans.(c)
Sol. $55 - 46 = ?^2$
$?^2 = 9$
? = 3

S73. Ans.(b)
Sol. $\sqrt{?} + 18 + 19 = \frac{290}{5}$
$\sqrt{?} = 58 - 37$
$\sqrt{?} = 21$
$? = 441$

S74. Ans.(c)

Sol. $1674 \times \frac{1}{27} \times 9 + 18 = ?^2$

$62 \times 9 + 18 = ?^2$

$?^2 = 576$

$? = 24$

S75. Ans.(e)

Sol. $? = 1.44 + 2.25 + 4.41 - 3.61$

$? = 4.49$

S76. Ans.(b)

Sol. $22 \times \frac{8}{121} + ? = \frac{38}{11}$

$? = \frac{38}{11} - \frac{16}{11}$

$? = \frac{22}{11} = 2$

S77. Ans.(d)

Sol. $?^2 = \frac{56}{8} \times 28$

$?^2 = 196$

$? = 14$

S78. Ans.(e)

Sol. $\frac{32}{35} \times 5 \times \frac{7}{8} \times \frac{35}{2} = ?$

$?= 70$

S79. Ans.(d)

Sol. $\frac{15}{100} \times \frac{200}{700} \times ? = 240$

$? = 240 \times \frac{7}{2} \times \frac{20}{3}$

$? = 5600$

S80. Ans.(e)

Sol. $? = 23 \times \frac{1}{48} \times 576 \times \frac{2}{3}$

$? = 23 \times 4 \times 2$

$?= 184$