IBPS RRB Clerk Pre 2025 Memory Based Paper Based on 7th December 2nd Shift

Directions (1-5): Read the given series carefully and answer the related question:
T % 7 Q B @ 3 A M & 9 $ Z 8 R ! 6 # T 2 ^ K 9 L $ C

Q1. Which element is 12th from the left end?
(a) A
(b) 9
(c) 8
(d) $
(e) 6

Q2. How many digits are there in the series that are immediately followed by a symbol and preceded by letter?
(a) One
(b) Two
(c) Three
(d) Four
(e) None

Q3. Which element is 4th to the right of the 3rd digit from left end?
(a) 8
(b) K
(c) 6
(d) #
(e) R

Q4. If all the symbols are dropped from the series, then which element is sixth from the left end?
(a) A
(b) M
(c) 3
(d) B
(e) K

Q5. How many letters in the series are immediately preceded by a symbol and immediately followed by a letter?
(a) One
(b) Two
(c) Three
(d) Four
(e) None

Directions (6-10): Read the given information carefully and answer the related questions:
Seven persons A, B, C, D, E, F and G were born on different days of a week from Monday to Sunday (not necessarily in the same order).
Three persons were born between B and C. Only two persons were born before C. D was born two persons before F. Two persons were born between A and D. A was born immediately before E. E was not born on Tuesday.

Q6. Who was born three persons after G?
(a) A
(b) E
(c) F
(d) G
(e) D

Q7. How many persons were born between E and F?
(a) One
(b) Two
(c) Three
(d) None
(e) Four

Q8. Which of the following combinations is correct?
(a) E – Tuesday
(b) F – Wednesday
(c) D – Friday
(d) A – Saturday
(e) G – Monday

Q9. Who was born on Sunday?
(a) A
(b) B
(c) D
(d) E
(e) F

Q10. Which of the following statements is/are not true?
I. Three persons was born before A.
II. F was born on Thursday
III. No person was born between G and C.
(a) Both I and III
(b) Only III
(c) Only II
(d) Both I and II
(e) All I, II and III

Directions (11-12): In this question, relationship between different elements is shown in the statements. The statements are followed by conclusions. Give answer:

Q11. Statements: P < Q > J ≥ R = K < T < U
Conclusions:
I. Q > T
II. U > R
(a) Only conclusion I is true
(b) Only conclusion II is true
(c) Either conclusion I or II is true
(d) Neither conclusion I nor II is true
(e) Both conclusions I and II are true

Q12. Statements: A ≥ E > N = O ≤ S < G = I
Conclusions:
I. E > G
II. A < S
(a) Only conclusion I is true
(b) Only conclusion II is true
(c) Either conclusion I or II is true
(d) Neither conclusion I nor II is true
(e) Both conclusions I and II are true

Q13. In the word **'CHANGE'**, how many pairs of the letters have the same number of letters between them (both forward and backward direction) as in the English alphabet?
(a) Three
(b) None
(c) One
(d) Two
(e) Four

Directions (14-18): Study the following information carefully and answer the questions given below.
In a certain coded language
"Utility goods new supply" is coded as "ta pm rp ke"
"Market that needs goods" is coded as "zu lx pm vo"
"Supply grows market utility" is coded as "ta ke zu mj"
"That utility boost service" is coded as "lx ta yt qr"

Q14. If "Service sector" is coded as "ot qr" then what is the code for boost?
(a) mj
(b) ta
(c) zu
(d) lx
(e) yt

Q15. Which word is coded as 'pm rp'?
(a) goods improve
(b) market goods
(c) service new
(d) New goods
(e) Cannot be determined

Q16. Which of the following statement(s) is/are definitely correct?
(a) That – zu
(b) Market -lx
(c) Needs -vo
(d) supply – rp
(e) All are correct

Q17. What is the code for 'Supply'?
(a) mj
(b) pm
(c) ta
(d) vo
(e) ke

Q18. Which among the following is coded as 'That Utility"?
(a) zu ta
(b) ta lx
(c) ke zu
(d) mj zu
(e) ta pm

Directions (19-21): Study the information carefully and answer the questions given below.
E is the only daughter of C. F is the sister-in-law of C. D is the mother of F. A is the father of B who is the father of H. G is the sister of A. There are three generations in the family. No single parent is there in the family.

Q19. How is H related to B?
(a) Daughter
(b) Nephew
(c) Son
(d) Father
(e) Son-in-law

Q20. How many female members are there in the family?
(a) Three
(b) Four
(c) Five
(d) Two
(e) Cannot be determined

Q21. If M is married to F, then how M is related to B?
(a) Father
(b) Brother
(c) Uncle
(d) Brother-in-law
(e) Can't be determined

Directions (22-26): Read the given information carefully and answer the related questions:
Six persons A, B, C, D, E and F were born on two different dates – 15 and 22 of three different months – June, September and December in same year. The persons were not born in the same order as given.
C was born in the month having 31 days. One person was born between C and B. D and B were born in same month. A was born before F but both were born on same date. E was not born on an even numbered date.

Q22. Who among the following was born on 15 December?
(a) E
(b) C
(c) D
(d) F
(e) B

Q23. How many persons were born before D?
(a) One
(b) Two
(c) Three
(d) Four
(e) None

Q24. F was born on which of the following date?
(a) 22 June
(b) 15 December
(c) 15 September
(d) 22 September
(e) 22 December

Q25. Four of the following five are similar in a certain manner and form a group, which among the following is not related to the group?
(a) F-E
(b) A-B
(c) B-D
(d) D-C
(e) C-F

Q26. Who among the following was born immediately after A?
(a) F
(b) C
(c) E
(d) B
(e) D

Q27. Which of the following will be the next element in the given series.
AC4 BD7 CE10 DF13 EG16 ?
(a) IH19
(b) HI20
(c) FG19
(d) FH19
(e) FH18

Directions (28-30): Read the given information carefully and answer the related questions:
Point A is 10 m west of point B, which is 8 m north of point C. Point D is 7 m east of point C. Point E is 5 m south of point D. Point F is 6 m west of point E. Point G is 4 m north of point F and 3 m east of point H.

Q28. What is the direction of point B with respect to point H?
(a) North
(b) South-west
(c) North-east
(d) South-east
(e) North-west

Q29. What is shortest distance between point H and point F?
(a) 5m
(b) 17m
(c) 12m
(d) $\sqrt{218}$m
(e) $\sqrt{61}$m

Q30. Four of the following five are similar in a certain manner and form a group, which of the following is not related to the group?
(a) A-H
(b) C-F
(c) B-E
(d) B-G
(e) F-D

Directions (31-34): The following question contains some statements followed by two conclusions numbered I and II. Assume that all the statements are true, even if they seem to differ from commonly known facts. Analyze both conclusions and decide which one logically follows from the given statements.
(a) If only conclusion I follows
(b) If only conclusion II follows
(c) If either conclusion I or II follows
(d) If neither conclusion I nor II follows
(e) If both conclusions I and II follow

Q31. Statements:
Only a few managers are leaders.
All leaders are planners.
Conclusions:
I. Some managers are planners
II. Some leaders are not managers

Q32. Statements:
Only a few crate are jug.
No box is jug.
Conclusions:
I. All box are crate
II. No box are crate

Q33. Statements:
Only a few writers are poets.
All poets are critics.
Some critics are lecturers.
Conclusions:
I. Some writers are lecturers
II. No writers are lecturers

Q34. Statements:
Only a few chefs are bakers.
Some bakers are cooks.
No cooks are authors.
Conclusions:
I. Some chefs are cooks
II. Some bakers are not authors

Q35. In the word '**INTRODUCE**', if the letters are arranged in alphabetical order from left, then which letter will be the 6th letter from left end?
(a) I
(b) O
(c) R
(d) N
(e) T

Directions (36-40): 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 shaped table, but not in same order as given. Four persons sit at the corner of the table facing inside and rest four persons sit at the middle of each side facing outside.
D sits immediate right of H. Three persons sit between D and A. C sits second to the right of A. No one sits between E and B. G sits this to the left of E. G faces inside.

Q36. 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) A
(b) B
(c) H
(d) G
(e) F

Q37. What is the position of B with respect to H?
(a) Fourth to the right
(b) Third to the right
(c) Immediate left
(d) Second to the left
(e) Second to the right

Q38. Who among the following sits immediate left of C?
(a) E
(b) G
(c) F
(d) B
(e) H

Q39. How many persons sit between G and E, when counted from the left of G?
(a) None
(b) Four
(c) Three
(d) Two
(e) One

Q40. Which among the following statement is true?
(a) E faces inside
(b) H and G are immediate neighbors
(c) F sits opposite to H
(d) D sits second to the right of G
(e) All the statements are true

Directions (41-45): The table given below shows the number of guest and number of rooms in five different hotels.

Hotels	Number of rooms	Number of guests
A	34	72
B	39	51
C	52	60
D	39	77
E	40	100

Q41. 51 guests living in 2/3rd of the rooms in D. find the remining number of guests living in per room in D.
(a) 9
(b) 3
(c) 16
(d) 6
(e) 2

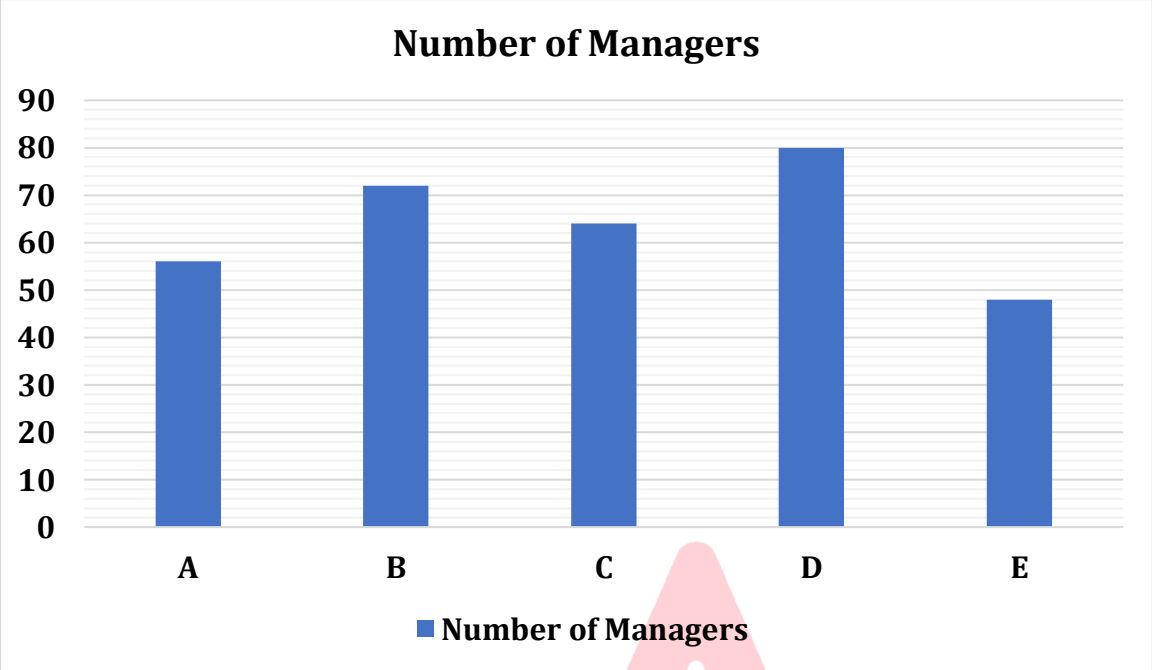
Q42. Find the average number of guests in B, C & A.
(a) 90
(b) 73
(c) 10
(d) 61
(e) 92

Q43. Find the ratio of number of rooms in A to number of rooms in E.
(a) 17:20
(b) 17:13
(c) 16:17
(d) 26:23
(e) 29:23

Q44. If number of guests in F is average of guests in A & C and number of rooms in F is 20% less rooms in E. Find the number of guest and rooms in F.
(a) 66,32
(b) 32,33
(c) 66,39
(d) 61,34
(e) 21,56

Q45. Number of guests in B is what percentage of number of guests in C.
(a) 89
(b) 83
(c) 85
(d) 86
(e) 82

Directions (46-50): The bar graph shows the number of managers in five companies. Read the data and answer the following question.



Q46. Find the average number of managers in A, C & E.

(a) 59
(b) 53
(c) 56
(d) 46
(e) 42

Q47. If the ratio of male to female managers in C and E is 3:1 and 1:1 respectively, then find the females managers in C and E.

(a) 39
(b) 40
(c) 36
(d) 16
(e) 24

Q48. If the number of managers in A is 12.5% less than the manager in F. find the difference between manager in F and D.

(a) 39
(b) 40
(c) 36
(d) 16
(e) 24

Q49. Managers in C is what percentage of managers in D.
(a) 80
(b) 83
(c) 85
(d) 86
(e) 82

Q50. Find the ratio of managers in A and D together to managers in E and B together.
(a) 17:15
(b) 17:13
(c) 16:17
(d) 26:23
(e) 29:23

Q51. The number of pens is three times the number of pencils, and the number of erasers is 12 less than the number of pens. If the average number of pens, pencils, and erasers is 10, find the number of pens.
(a) 22
(b) 18
(c) 6
(d) 12
(e) 10

Q52. The quantities of milk in three jars A, B, and C are in the ratio 4 : 1 : 2 respectively. The total amount of milk in all three jars together is 28 liters. If 4 liters of milk are added to jar B, find the new ratio of milk in jars A, B, and C respectively.
(a) 1:2:1
(b) 2:1:1
(c) 1:1:2
(d) 2:1:2
(e) 1:2:3

Q53. A man invested equal amounts in two schemes, Scheme A and Scheme B. Scheme A offers simple interest at 8% per annum for 2 years, while Scheme B offers simple interest at 14% per annum for 2 years. The total simple interest earned from both schemes together is Rs 4,400. Find the amount invested in Scheme A (in Rs).
(a) 10000
(b) 12000
(c) 8000
(d) 7500
(e) 9000

Q54. Tanisha and Juli started a business together with a total investment of Rs 5,000. After 8 months, Juli left the business. At the end of the year, the profit-sharing ratio of Tanisha to Juli was equal. Find the initial investment of Tanisha (in Rs).
(a) 2500
(b) 1500
(c) 2000
(d) 3000
(e) 1000

Q55. A train crosses a platform in 21 seconds while running at a speed of 72 km/h. The length of the platform is 60 meters more than the length of the train. Find the length of the train (in meters).
(a) 120
(b) 240
(c) 180
(d) 150
(e) 200

Q56. The monthly incomes of Mahesh and Hari are in the ratio of 5 : 6 respectively. Mahesh spends 20% of his income on rent, 25% of the remaining amount on EMI, and 10% of the remaining amount on food. He saves the rest of his income. If Mahesh's savings amount to Rs 13,500, find the monthly income (in Rs) of Hari.
(a) 25000
(b) 35000
(c) 20000
(d) 30000
(e) 14000

Q57. The present ages of two sons together are equal to the present age of their father. Three years ago, the age of the elder son was half of his father's age at that time. If the present age of the younger son is 23 years, then find the age (in years) of the father after 1 year from now.
(a) 49
(b) 47
(c) 43
(d) 48
(e) 50

Q58. The area of a rectangle is 98 cm^2, and the breadth of the rectangle is half of its length. Find the sum of the length and breadth of the rectangle (in cm).
(a) 21
(b) 14
(c) 18
(d) 24
(e) 32

Q59. A can complete a piece of work in 20 days, and B can complete the same work in 30 days. Working together, A, B, and C can finish the work in 10 days. Find the number of days C alone would take to complete the work.
(a) 40
(b) 80
(c) 55
(d) 45
(e) 60

Q60. A shopkeeper marks the price of an article 50% above its cost price and allows a 20% discount on the marked price. If the profit earned is Rs 40, find the discount allowed (in Rs).
(a) 40
(b) 60
(c) 50
(d) 30
(e) 80

Directions (61-65): Find the wrong number in the given series.

Q61. 12000, 6000, 3000, 1500, 750, 325
(a) 6000
(b) 1200
(c) 750
(d) 325
(e) 1500

Q62. 1.5, 3, 29, 117, 469, 1877, 7509
(a) 117
(b) 1.5
(c) 29
(d) 7509
(e) 3

Q63. 160, 173, 190, 209, 232, 260, 292
(a) 190
(b) 173
(c) 160
(d) 260
(e) 292

Q64. 285, 281, 265, 229, 160, 65
(a) 285

(b) 281
(c) 265
(d) 65
(e) 160

Q65. 10,1343, 2343, 3072, 3584, 3927, 4143
(a) 1343
(b) 2343
(c) 10
(d) 3072
(e) 3584

Directions (66-80): What will come in the place of question (?) mark in following the question:

Q66. (66% of 600) % of 25 = ? % of 50
(a) 166
(b) 148
(c) 288
(d) 316
(e) 198

Q67. $\frac{?}{16} = \frac{7}{?} \times \frac{1}{343} \times 49$
(a) 4
(b) 8
(c) 6
(d) 1
(e) 7

Q68. $676^{1/2} - 224 + 200 = ?$
(a) 4
(b) 8
(c) 6
(d) 2
(e) 3

Q69. $22 \times 25 + 400 = ?$
(a) 950
(b) 960
(c) 920
(d) 900
(e) 980

Q70. 220 % of 250 + 60 % of 550 =? × 8
(a) 140
(b) 130
(c) 125
(d) 120
(e) 110

Q71. 25% of 320 + 40% of 250 + $33\frac{1}{3}\%$ *of* 30 =?
(a) 190
(b) 230
(c) 250
(d) 200
(e) 240

Q72. 16 × 16 ÷ 64 = ?
(a) 1
(b) 3
(c) 2
(d) 4
(e) 6

Q73. 520 + 480 = ? × 8 + 200
(a) 150
(b) 130
(c) 120
(d) 110
(e) 100

Q74. [2×{42+10}] = ?
(a) 105
(b) 102
(c) 101
(d) 104
(e) 100

Q75. 600 + (45×16) – ? = 25
(a) 1395
(b) 1295
(c) 1285
(d) 1495
(e) 1290

Q76. $4570 + 430 - ?^2 = 50^2$
(a) 50
(b) 55
(c) 52
(d) 53
(e) 54

Q77. $\sqrt{1225} + \sqrt{196} = ?^2 + 24$
(a) 4
(b) 5
(c) 8
(d) 3
(e) 9

Q78. $4500 + ? = 2500 + 3500 - 300$
(a) 1250
(b) 1230
(c) 1280
(d) 1200
(e) 1210

Q79. $3\frac{1}{2} + 4\frac{1}{2} - 2\frac{1}{4} = ?$
(a) $3\frac{3}{4}$
(b) $2\frac{3}{4}$
(c) $6\frac{3}{4}$
(d) $9\frac{3}{4}$
(e) $5\frac{3}{4}$

Q80. $\frac{25}{69} \times \frac{23}{5} \times \frac{1}{25} = \frac{?}{15}$
(a) 5
(b) 3
(c) 8
(d) 1
(e) 4

Solutions

S1. Ans.(d)

S2. Ans.(a)
Sol. One -T 2 ^

S3. Ans.(e)

S4. Ans.(a)

S5. Ans.(e)

Directions (6-10):
Sol.

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

S6. Ans.(c)

S7. Ans.(a)

S8. Ans.(e)

S9. Ans.(b)

S10. Ans.(a)

Directions (11-12):

S11. Ans.(b)
Sol. I. Q > T (False)
II. U > R (True)

S12. Ans.(d)
Sol. I. E > G (False)
II. A < S (False)

S13. Ans.(d)

Sol.

Directions (14-18):

Sol.

Words	Codes
Utility	ta
Goods	pm
Supply	ke
New	rp
Market	zu
That	lx
Needs	vo
Grows	mj
Service/ Boost	qr/yt

S14. Ans.(e)

S15. Ans.(d)

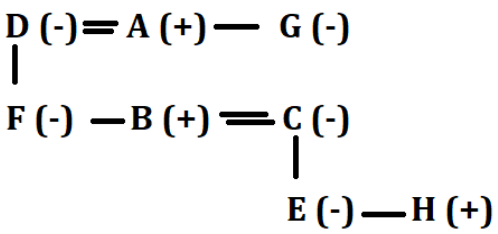
S16. Ans.(c)

S17. Ans.(e)

S18. Ans.(b)

Directions (19-21):

Sol.



S19. Ans.(c)

S20. Ans.(c)

S21. Ans.(d)

Directions (22-26):
Sol.

Months	Dates	Persons
June	15	E
	22	A
September	15	B
	22	D
December	15	C
	22	F

S22. **Ans.(b)**

S23. Ans.(c)

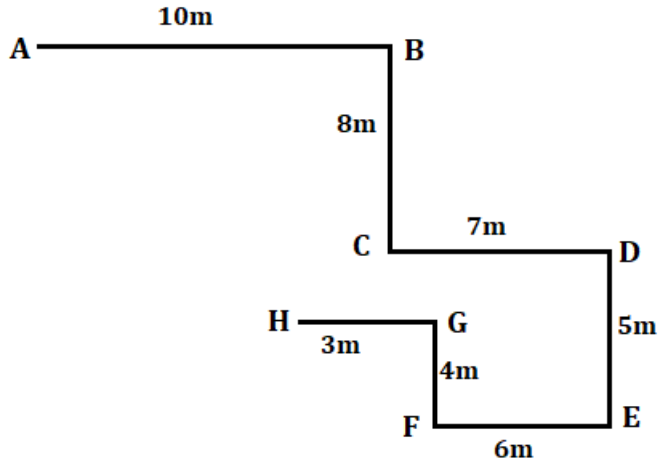
S24. Ans.(e)

S25. Ans.(a)
Sol. Except F-E, both persons in the pair were born adjacent to each other.

S26. Ans.(d)

S27. Ans.(d)
Sol. First letter = Immediate next letter
Second letter = Immediate next letter
Number = Increased by 3 (+3)

Directions (28-30):
Sol.



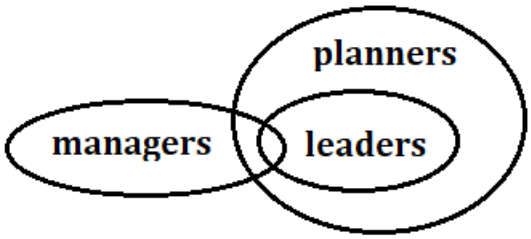
S28. Ans.(c)

S29. Ans.(a)

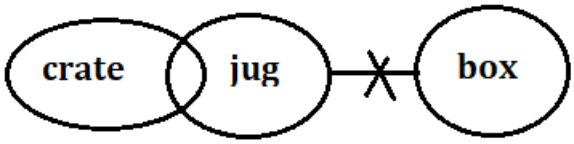
S30. Ans.(e)

Directions (31-34):

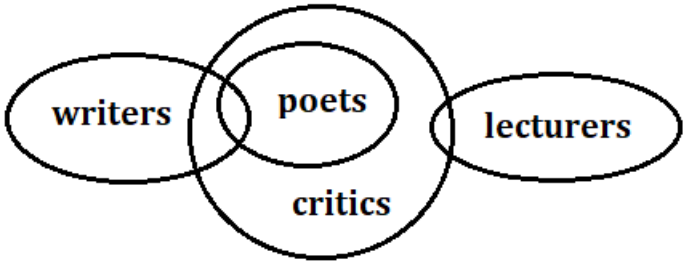
S31. Ans.(a)
Sol.



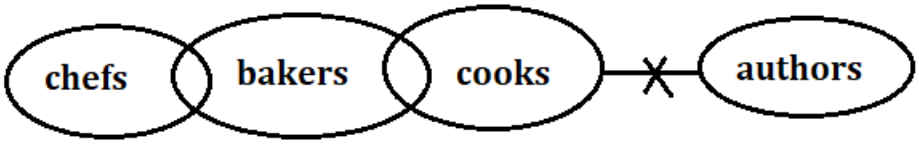
S32. Ans.(d)
Sol.



S33. Ans.(c)
Sol.

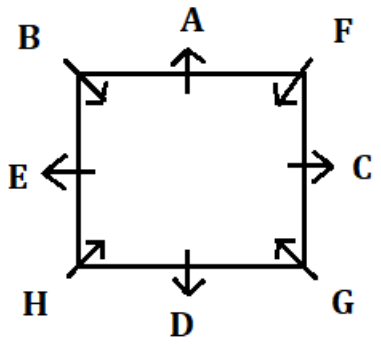


S34. Ans.(b)
Sol.



S35. Ans.(b)
Sol. INTRODUCE – CDEIN**O**RTU

Directions (36-40):
Sol.



S36. Ans.(a)
S37. Ans.(d)
S38. Ans.(c)
S39. Ans.(d)
S40. Ans.(c)

S41. Ans.(e)
Sol.
$2/3^{rd}$ of the rooms in D = 2/3 ×39=26
Remaining guest in D= 77 – 51 = 26
Remaining rooms in D= 39 – 26 = 13
Guests per room = 26/13= 2

S42. Ans.(d)
Sol.
Required answer = $\frac{51+60+72}{3} = 61$

S43. Ans.(a)
Sol.
Required answer =34:40 = 17:20

S44. Ans.(a)
Sol.
Total guests in F = $\frac{72+60}{2} = 66$
Rooms in F = 80% of (40) = 32
Required answer = 66, 32

S45. Ans.(c)
Sol.
Required answer $=\frac{51}{60} \times 100 = 85\%$

S46. Ans.(c)
Sol.
Required answer $= \frac{56+64+48}{3} = 56$

S47. Ans.(b)
Sol.
Required answer $= \frac{1}{4} \times 64 + \frac{1}{2} \times 48 = 40$

S48. Ans.(d)
Sol.
Required answer $= 80 - \frac{100}{87.5} \times 56 = 16$

S49. Ans.(a)
Sol.
Required answer $=\frac{64}{80} \times 100 = 80\%$

S50. Ans.(a)
Sol.
Required answer = 56+80:48+72 = 136: 120 = 34:30 = 17:15

S51. Ans.(b)
Sol.
Information Given in the Question:
Number of pens = 3 × number of pencils
Number of erasers = number of pens -12
Average of pens, pencils, and erasers = 10
Concept/Formula Used in the Question:
Average = (Sum of all values) / (Number of values)
Detailed Explanation:
Let the number of pencils = x
Then, number of pens = 3x
Number of erasers = 3x -12
Total = x + 3x + (3x -12) = 7x -12
Average = (Total) / 3
According to question:
(7x -12)/3 = 10
7x -12 = 30

7x = 42
x = 6
So, number of pens = 3x = 3 × 6 = 18

S52. Ans.(b)
Sol.
Information Given in the Question:
Initial ratio of milk in jars A : B : C = 4 : 1 : 2
Total quantity of milk = 28 liters
4 liters of milk is added to jar B
Need to find the new ratio A : B : C
Detailed Explanation:
Initial ratio = 4 : 1 : 2 → Sum of parts = 4 + 1 + 2 = 7 parts
So, 1 part = 28 / 7 = 4 liters
Milk in:
Jar A = 4 × 4 = 16 liters
Jar B = 4 × 1 = 4 liters
Jar C = 4 × 2 = 8 liters
Now, 4 liters of milk is added to Jar B → New quantity in B = 4 + 4 = 8 liters
New quantities:
Jar A = 16 liters
Jar B = 8 liters
Jar C = 8 liters
New ratio = 16 : 8 : 8
= 2 : 1 : 1

S53. Ans.(a)
Sol.
Information Given in the Question:
Equal amount invested in both schemes (let it be Rs x in each)
Scheme A: 8% p.a. SI for 2 years
Scheme B: 14% p.a. SI for 2 years
Total interest from both = Rs 4,400
Concept/Formula Used in the Question:
Simple Interest (SI) = (P × R × T) / 100
Total SI = SI from Scheme A + SI from Scheme B
Detailed Explanation:
Let the invested amount in each scheme = Rs x
Scheme A:
Rate = 8%, Time = 2 years
SI = (x × 8 × 2) / 100 = (16x) / 100
Scheme B:
Rate = 14%, Time = 2 years

SI = (x × 14 × 2) / 100 = (28x) / 100
Total SI:
(16x + 28x)/100 = 4,400
⇒ 44x / 100 = 4400
⇒ x = (4400 × 100) / 44
⇒ x = 10000
So, amount invested in Scheme A = Rs 10,000

S54. Ans.(c)
Sol.
Information Given in the Question:
Total investment = Rs 5,000
Juli left after 8 months
Profit-sharing ratio Tanisha : Juli = 1 : 1
Business ran for 12 months
Tanisha was in the business the entire year
Concept/Formula Used in the Question:
Profit is shared in proportion to: **Investment × Time**
Let one investment be **x**, the other is **5000 -x**
Detailed Explanation:
Let Tanisha's investment = Rs x
Then, Juli's investment = Rs (5000 -x)
Tanisha worked for 12 months, Juli worked for 8 months
Profit share:
Tanisha = x × 12
Juli = (5000 -x) × 8
Given that their profit shares are equal:
x × 12 = (5000 -x) × 8
12x = 40000 -8x
⇒ 12x + 8x = 40000
⇒ 20x = 40000
⇒ x = 40000 / 20 = 2,000
So, Tanisha's investment = Rs 2,000

S55. Ans.(c)
Sol.
Information Given in the Question:
Time taken to cross platform = 21 seconds
Speed of train = 72 km/h = 72 × (5/18) = 20 m/s
Let the length of the train be = x meters
Length of platform = x + 60 meters
Concept/Formula Used in the Question:
Speed = Distance / Time

Detailed Explanation:

Convert speed:

$72 \text{ km/h} = 72 \times \frac{5}{18} = 20 \text{ m/s}$

Total length to be covered = x + (x + 60) = 2x + 60

ATQ,

$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$

$20 = \frac{2x+60}{21}$

$420 = 2x + 60$

$2x = 360$

$x = 180$

S56. Ans.(d)

Sol.

Information Given in the Question:

Income ratio (Mahesh : Hari) = 5 : 6

Mahesh spends:

20% on rent

25% of the remaining on EMI

10% of the remaining on food

Mahesh's final savings = Rs. 13,500

Detailed Explanation:

Let Mahesh's income = $5x$

Rent:

20% of $5x = \frac{20}{100} \times 5x = x$

Remaining after rent = $5x - x = 4x$

EMI:

25% of $4x = \frac{25}{100} \times 4x = x$

Remaining after EMI = $4x - x = 3x$

Food:

10% of $3x = \frac{10}{100} \times 3x = 0.3x$

Remaining after food = $3x - 0.3x = 2.7x$

So, Savings = 2.7x = Rs. 13,500

$\Rightarrow x = \frac{13500}{2.7} = 5000$

Now, Hari's income = 6x = 6 × 5000 = Rs. 30,000

S57. Ans.(e)

Sol.

Information Given in the Question:

Present age of younger son = 23 years

Let present age of elder son = E years
Present age of father = E + 23 years (since sum of sons' ages = father's age)
Three years ago:
Elder son's age = E -3
Father's age = (E + 23) -3 = E + 20
At that time, elder son's age = ½ × father's age
Detailed Explanation:
Let present age of elder son = E years
Then, father's present age = E + 23
Three years ago:
Elder son's age = E -3
Father's age = E + 20
According to question:
E -3 = 1/2 × (E + 20)
2E -6 = E + 20
2E -E = 20 + 6
E = 26
So, elder son's age = 26 years
Father's age = E + 23 = 26 + 23 = 49 years
Father's age after 1 year = 49 + 1 = 50 years

S58. Ans.(a)
Sol.
Information Given in the Question:
Area of rectangle = 98 cm^2
Breadth = 1/2 × Length
Need to find: Length + Breadth
Concept/Formula Used in the Question:
Area of rectangle = Length × Breadth
Breadth = 1/2 × Length
Detailed Explanation:
Let the length = Lcm
Then, breadth = $\frac{1}{2}L$cm
Area = Length × Breadth
$98 = L \times \frac{1}{2}L$
$\Rightarrow 98 = \frac{L^2}{2}$
$196 = L^2$
$\Rightarrow L = \sqrt{196} = 14$cm
Now, breadth = $\frac{1}{2} \times 14 = 7$cm
Sum of length and breadth = 14 + 7 = 21 cm

S59. Ans.(e)
Sol.
Information Given in the Question:
A can do the work in 20 days
B can do the work in 30 days
A + B + C together can do the work in 10 days
Need to find: Days C alone would take
Concept/Formula Used in the Question:
Efficiency = Work / Time
Total work – (A's work + B's work) = C's work
Then, Days = Work / Efficiency
Detailed Explanation:
Let total work = LCM of 20, 30, 10 = **60 units**
Individual efficiencies:
A's 1-day work = 60 / 20 = 3 units/day
B's 1-day work = 60 / 30 = 2 units/day
A + B + C's 1-day work = 60 / 10 = 6 units/day
Step 3: Work done by A and B together = 3 + 2 = 5 units/day
So, C's 1-day work = 6 -5 = 1 unit/day
Days C alone would take = 60 / 1 = 60 days

S60. Ans.(b)
Sol.
Information Given in the Question:
Marked Price = 150% of Cost Price
Discount = 20% on Marked Price
Profit = Rs 40
Need to find the **discount allowed in rupees**
Concept/Formula Used in the Question:
Marked Price (MP) = Cost Price (CP) × 1.5
Selling Price (SP) = MP × (1 -Discount%)
Profit = SP -CP
Detailed Explanation:
Let the Cost Price (CP) = Rs x
Then, Marked Price (MP) = 1.5x
Discount = 20% → SP = 1.5x × 0.8 = 1.2x
Given: Profit = SP -CP = 1.2x -x = 0.2x = Rs 40
⇒ 0.2x = 40
⇒ x = Rs 200 (Cost Price)
Now,
MP = 1.5 × 200 = Rs 300
SP = Rs 240
Discount allowed = MP -SP = 300 -240 = Rs 60

S61. Ans.(d)
Sol.
The pattern of the series is-
12000÷2=6000
6000÷2=3000
3000÷2=1500
1500÷2=750
750÷2= 375

S62. Ans.(e)
Sol.
The pattern of the series is-
1.5 ×4+1= 7
7 ×4+1= 29
29 ×4+1= 117
117 ×4+1= 469
469 ×4+1= 1877
1877×4+1= 7509

S63. Ans.(d)
Sol. The pattern of the series—
160 +13= 173
173 +17= 190
190+19= 209
209 +23= 232
232 +29= 261
261+31= 292

S64. Ans.(e)
Sol.
The pattern of the series-
285-(4)=281
281-(16)=265
265-(36)=229
229-(64)=165
165-(100)=65

S65. Ans.(c)
Sol. The pattern of the series is-
12 + 1331 = 1343
1343 + 1000 = 2343
2343 + 729 = 3072

3072 + 512 = 3584
3584+ 343 = 3927
3927 + 216 = 4143

S66. Ans.(e)
Sol.
$[\frac{66}{100} \times 600]$ % of 25 =? % of 50
$396 \times \frac{1}{4} = \frac{?}{100} \times 50$
? = 99 × 2
? = 198

S67. Ans.(a)
Sol. $\frac{?}{16} = \frac{7}{?} \times \frac{1}{343} \times 49$
$\frac{?}{16} = \frac{1}{?}$
$?^2 = 16$
? = 4

S68. Ans.(d)
Sol. 26 – 224 + 200 = ?
? = 2

S69. Ans.(a)
Sol.
?= 22 × 25 + 400
? = 950

S70. Ans.(e)
Sol. $8 \times ? = \frac{220}{100} \times 250 + \frac{60}{100} \times 550$
8 × ? = 550+ 330
? = 110

S71. Ans.(a)
Sol. $\frac{25}{100} \times 320 + \frac{40}{100} \times 250 + \frac{1}{3} \times 30 = ?$
80 + 100 + 10 = ?
190 =?

S72. Ans.(d)
Sol.
16 × 16 ÷ 64 = ?
4= ?

S73. Ans.(e)
Sol. 520 + 480 – 200 = ? × 8
1000 – 200 = ? × 8
800 = ? × 8
? = 100

S74. Ans.(d)
Sol. [2×{42+10}] = ?
? = 2 × 52
? = 104

S75. Ans.(b)
Sol. 600 + 720 -? = 25
1320 – 25 =?
1295 =?

S76. Ans.(a)
Sol. 5000 -$?^2$ = 2500
$?^2$ = 5000 – 2500
$?^2$ = 2500
? = 50

S77. Ans.(b)
Sol. 35 + 14 – 24 = $?^2$
49 – 24 = $?^2$
25 = $?^2$
? = 5

S78. Ans.(d)
Sol.? = 6000 – 300 – 4500
? = 6000 – 4800
? = 1200

S79. Ans.(e)
Sol. (3+4-2) + $(\frac{2+2-1}{4})$ = ?
$5\frac{3}{4}$ = ?

S80. Ans.(d)
Sol. $\frac{25}{69} \times \frac{23}{5} \times \frac{1}{25} = \frac{?}{15}$
? = 1