

IBPS RRB Clerk Pre 2025 Memory Based Paper Based on 6th December 2nd Shift

Directions (1-5): Study the following series carefully and answer the question given below:

P & K * V Z L # W A % S R ! M @ X F Y ? Q + C ^ U T Z \$

Q1. Which symbol is fifth to the right of the third letter from the left end in the series?

- (a) *
- (b) +
- (c) !
- (d) ?
- (e) &

Q2. If all symbols are dropped from the series, which letter will be seventh from the right end in the remaining series?

- (a) F
- (b) X
- (c) M
- (d) T
- (e) R

Q3. Which element will be the seventh symbol from the left end in the series?

- (a) R
- (b) M
- (c) !
- (d) X
- (e) F

Q4. How many symbols are immediately followed by a letter in the series?

- (a) One
- (b) Two
- (c) Three
- (d) Four
- (e) None

Q5. How many vowels in the series are immediately followed by a letter?

- (a) One
- (b) Two
- (c) Three
- (d) Four
- (e) None



Directions (6-8): Study the following information carefully and answer the questions given below:

A certain number of persons sit in a row and face north. H sits third to the right of K. Five persons sit between H and D. E sits immediately left of K. Only two persons sit between D and J. A sits second to the right of J. A and D are not immediate neighbours. Number of persons sit between E and D is same as the number of persons sit to the right of D. E sits second from one the ends of the row.

Q6. Who among the following persons sits 11th to the left of A?

- (a) K
- (b) E
- (c) H
- (d) None of these
- (e) D

Q7. What is the position of A?

- (a) Sixth from the left
- (b) Sixth from the right
- (c) Third from the left
- (d) Seventh from the left
- (e) Third from the right

Q8. How many persons sit between E and D?

- (a) 20
- (b) 16
- (c) 18
- (d) 19
- (e) 21

Directions (9-10): Study the following information carefully and answer the questions given below:

Statements:

Statements:

Q9. Statements:

Conclusions:

I. $R > W$

II. $K < G$

(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 conclusions I and II are true

(e) If neither conclusion I nor II is true

Q10. Statements: $M > B \leq C \leq A = E \leq O \geq F > G = P$

Conclusions:

I. $P < O$

II. $O \geq B$

(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 conclusions I and II are true

(e) If neither conclusion I nor II is true

Q11. Statements: $L = M \leq N \leq O = P > Q \leq R$

Conclusions:

I. $P > L$

II. $N < R$

- (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 conclusions I and II are true
- (e) If neither conclusion I nor II is true

Q12. Statement: $X > Y > Z > A > B > C > D > E$

Conclusions

I. $X > B$

II. $Z \leq E$

- (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 conclusions I and II are true
- (e) If neither conclusion I nor II is true

Directions (Q13-Q15): Read the following information carefully and answer the questions that follow.

C is the sister of A. D is the brother of B. E is the mother-in-law of B. F is the sister of A.

There is no sister of B.

Q13. How is D related to A?

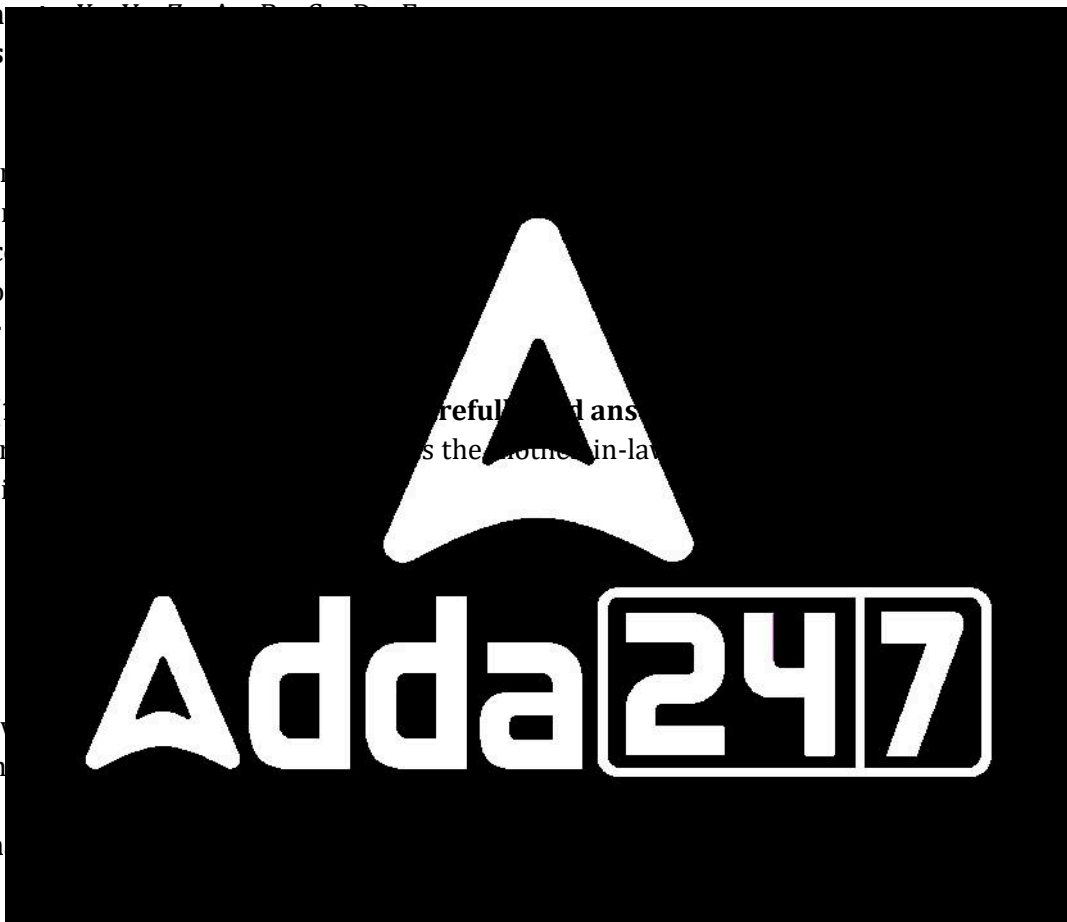
- (a) Son
- (b) Nephew
- (c) Uncle
- (d) Son-in-law
- (e) Grandson

Q14. How many people are there in the family?

- (a) Four
- (b) Three
- (c) Five
- (d) Can't be determined
- (e) Six

Q15. How is H related to D?

- (a) Grandson
- (b) Daughter
- (c) Son
- (d) Uncle
- (e) None of these



Q16. In the number '5693728', if all the digits are arranged in descending order from left end, then how many digits remain unchanged at its position in the new number formed after rearrangement?

- (a) None
- (b) Two
- (c) Three
- (d) Five
- (e) One

Directions (17-21): Read the given information carefully and answer the related questions:

Seven boxes A, B, C, D, E, F and G are placed one above the other in a stack but not in the same order as given.

Three boxes are placed below box A. Box D is placed below box B. Box A is placed below box H. Box B is placed below box E. Number of boxes placed below box G is one more than the number of boxes placed below box G and box C which is placed below box A.

Q17. Which

- (a) E
- (b) G
- (c) B
- (d) D
- (e) A

Q18. How m

- (a) One
- (b) Three
- (c) Four
- (d) Five
- (e) Two

Q19. If all the boxes are arranged in alphabetical order from bottom to top, then how many boxes will remain same in their position?

- (a) Three
- (b) None
- (c) Four
- (d) Two
- (e) One

Q20. What is the position of box G from bottom?

- (a) First
- (b) Third
- (c) Second
- (d) Fifth
- (e) Sixth

Q21. Which of the following box is placed two boxes below box A?



-
- (a) G
 - (b) F
 - (c) C
 - (d) B
 - (e) D

Directions (22-25): The following questions are based on the five three-digit numbers given below:

492 625 381 967 154

Q22. If the first and third digit of each number is interchanged within the number, then which of the following will be the second highest number?

- (a) 492
- (b) 154
- (c) 625
- (d) 381
- (e) 967

Q23. If the difference between the sum of first and the second digit of each number is interchanged with the sum of first and the second digit of each number, then which of the following will be the second highest number?

- (a) One
- (b) Two
- (c) Three
- (d) Four
- (e) None

Q24. What will be the sum of the first and the second digit of each number?

- (a) 15
- (b) 10
- (c) 17
- (d) 14
- (e) 19

Q25. If 2 is added to the first digit of each number, then which of the following will be the second highest number?

- (a) None
- (b) One
- (c) Two
- (d) Three
- (e) More than three



Directions (26-30): Read the given information carefully and answer the related question:

A, B, C, D, E, F and G were born on same date of different months in a year (but not in same order as given). The months are – March, April, May, June, July, August and September.

A was born in the month having even number of days. Three persons were born between A and C. G is two months older to C. E was born immediately after G. Two persons were born between E and B. D is younger to B.

Q26. Who among the following was born in July?

-
- (a) F
 - (b) B
 - (c) E
 - (d) D
 - (e) C

Q27. 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) D
- (c) B
- (d) C
- (e) G

Q28. D was born on

- (a) May
- (b) March
- (c) September
- (d) August
- (e) June

Q29. How many

- (a) None
- (b) Four
- (c) One
- (d) Three
- (e) Two

Q30. If all the persons are arranged in alphabetical order from March to September, how many persons will remain at their position?

- (a) Two
- (b) One
- (c) Four
- (d) None
- (e) Three



Directions (31-33): In the question below, some statements are given followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts. Give answer-

Q31. Statements: Only a few cup is can

All cup is kettle

No can is jar

Conclusions:

I. Some kettle is not jar

II. No Cup is jar

-
- (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

Q32. Statements: Some colours are pens

All pens are pencils

Only a few pencils are glitters

Conclusions:

I. All pencils being glitters is a possibility

II. Some colours are pencils

(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

Q33. Statements:

Only a few squares are lines

Conclusions:

I. Some squares are lines

II. Some lines are squares

(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

Q34. In the question below, some statements are given, followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and the statements, and decide which of the conclusions follow from the given statements, and choose the correct answer.

Statements: All fruits are vegetables

Only a few vegetables are carrots

Some carrots are not tomatoes

Conclusions:

I. All fruits being tomatoes is a possibility

II. No vegetable is carrot

(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

Q35. In the word 'SOLVENT', 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) One
- (b) Two
- (c) Four
- (d) Three
- (e) Five

Directions (36-40): Read the given information carefully and answer the related question:

Seven persons A, B, C, D, E, F and G sit around a circular table facing inside (equidistant from each other) but not in same order as given.

One person sits between the number of persons sit between persons A and E (when counted in clockwise direction).

Q36. What is the position of A?

- (a) Immediate left of G
- (b) Third to the right of G
- (c) Second to the right of G
- (d) Immediate right of G
- (e) Third to the left of G

Q37. Who are sitting to the right of G?

- (a) E
- (b) D
- (c) A
- (d) F
- (e) B

Q38. How many persons sit between D and E when counted from the left of D?

- (a) None
- (b) Two
- (c) Four
- (d) One
- (e) Three

Q39. If B is related to E, in the similar way C is related to G, then who among the following is related to F?

- (a) E
- (b) A
- (c) D
- (d) C
- (e) B

Q40. If all the are made to sit in alphabetical order starting from A in clockwise direction, then how many persons will remain same at their position (excluding A)?

- (a) One
(b) Two
(c) Three
(d) Four
(e) Five

Directions (41-45): The table given below shows the marks scored by P, Q, R, S and T in three different subjects (i.e. English, Hindi and Maths). Read the data carefully and answer the following question.

Students	English	Hindi	Maths
P	120	100	130
Q	100	120	110
R	110	110	120
S	130	130	100
T	140	140	110

Q41. Find the ratio of marks scored by P and Q in Hindi.

- (a) 7:9
(b) 3:2
(c) 3:1
(d) 2:1
(e) 1:1

Q42. The total marks scored by P and T in Hindi is what per cent of the marks scored by S in English and Maths?

- (a) 90%
(b) 33%
(c) 66%
(d) 76%
(e) 75%

Q43. If total marks scored by P and R together in English and Maths is 3:6:4 respectively, find the marks scored by P in Hindi.

- (a) 120
(b) 150
(c) 100
(d) 190
(e) 110

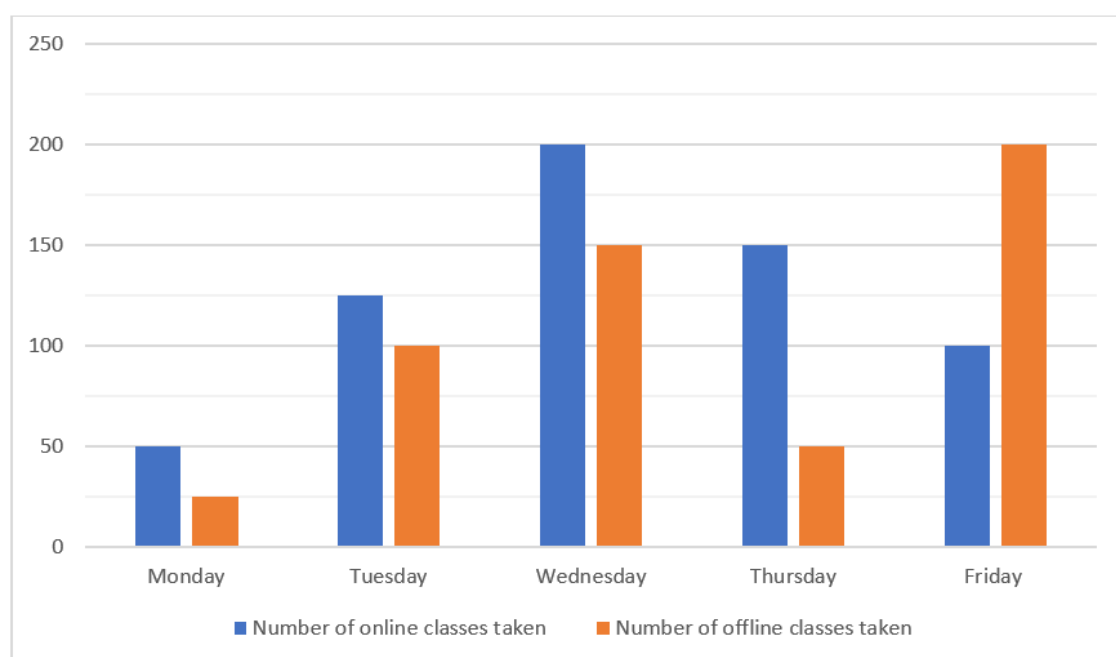
Q44. Find the average mark scored by all in Hindi.

- (a) 114.4
(b) 113.4
(c) 118.4
(d) 117.4
(e) 110.4

Q45. Find the difference between mark score by T and Q together in English and R and S together in Hindi.

- (a) 120
- (b) 150
- (c) 100
- (d) 140
- (e) 110

Directions (46-50): The bar graph shows the number of students taking online and off-line classes on five different days. Read the data and answer the following question.



Q46. Find the difference between the number of students taking online classes and the number of students taking off-line classes on Wednesday.

- (a) 120
- (b) 150
- (c) 100
- (d) 190
- (e) 110

Q47. Find the ratio of student taking online classes on Monday and Tuesday together to students taking off-line classes on Friday.

- (a) 7:9
- (b) 3:2
- (c) 3:1
- (d) 2:1
- (e) 7:8

Q48. On Saturday the number of online classes taken by students is 20% less than the off-line classes taken by students on Monday, then find the sum of online class taken by students on Saturday and Friday.

- (a) 120
- (b) 150
- (c) 100
- (d) 140
- (e) 110

Q49. Online class taken by students on Monday and Friday is what percentage of total off-line classes taken by students on Monday and Friday?

- (a) 120
- (b) 150
- (c) 100
- (d) 140
- (e) 110

Q50. If the number of online classes taken by students on Monday is 20% more/less than the online classes taken by students on Tuesday, then find the percentage of online classes taken by students on Monday.

- (a) 20
- (b) 50
- (c) 0
- (d) 40
- (e) 10

Q51. A 42-litre mixture contains milk and water in the ratio 2 : 5 respectively. After adding some quantity of milk, the ratio of water to milk becomes 4 : 5. Find the quantity of milk added (in litres).

- (a) 120
- (b) 108
- (c) 90
- (d) 85
- (e) 112

Q52. A and B together can complete a piece of work in 15 days, while B alone can complete it in 36 days. If both A and B start working together, but B leaves 6 days before the work is finished, find the total time taken by A to complete the remaining work.

- (a) 12.5
- (b) 17.5
- (c) 15.5
- (d) 11.5
- (e) 19.5

Q53. The breadth of a rectangle is 25% less than the length of the rectangle. If the perimeter of the rectangle is 70 cm, then find the area of the rectangle (in cm^2).

-
- (a) 300
 - (b) 450
 - (c) 320
 - (d) 280
 - (e) 480

Q54. A shopkeeper allowed a 20% discount off the marked price of an article. If he earned a profit of Rs 450 and the difference between the cost price and marked price of the article is Rs 1900, then find the cost price of the article (in Rs).

- (a) 5650
- (b) 5850
- (c) 5350
- (d) 5550
- (e) 5150

Q55. A can travel 100 km in 10 hours and B can travel 80 km in 8 hours. How many km are travelled by A and B together in 1 hour?

- (a) 100
- (b) 80
- (c) 90
- (d) 75
- (e) 120

Q56. The upstream speed of a boat is 10 km/hr, and the downstream speed is 16 km/hr. Find the time taken by the boat to travel 48 km upstream.

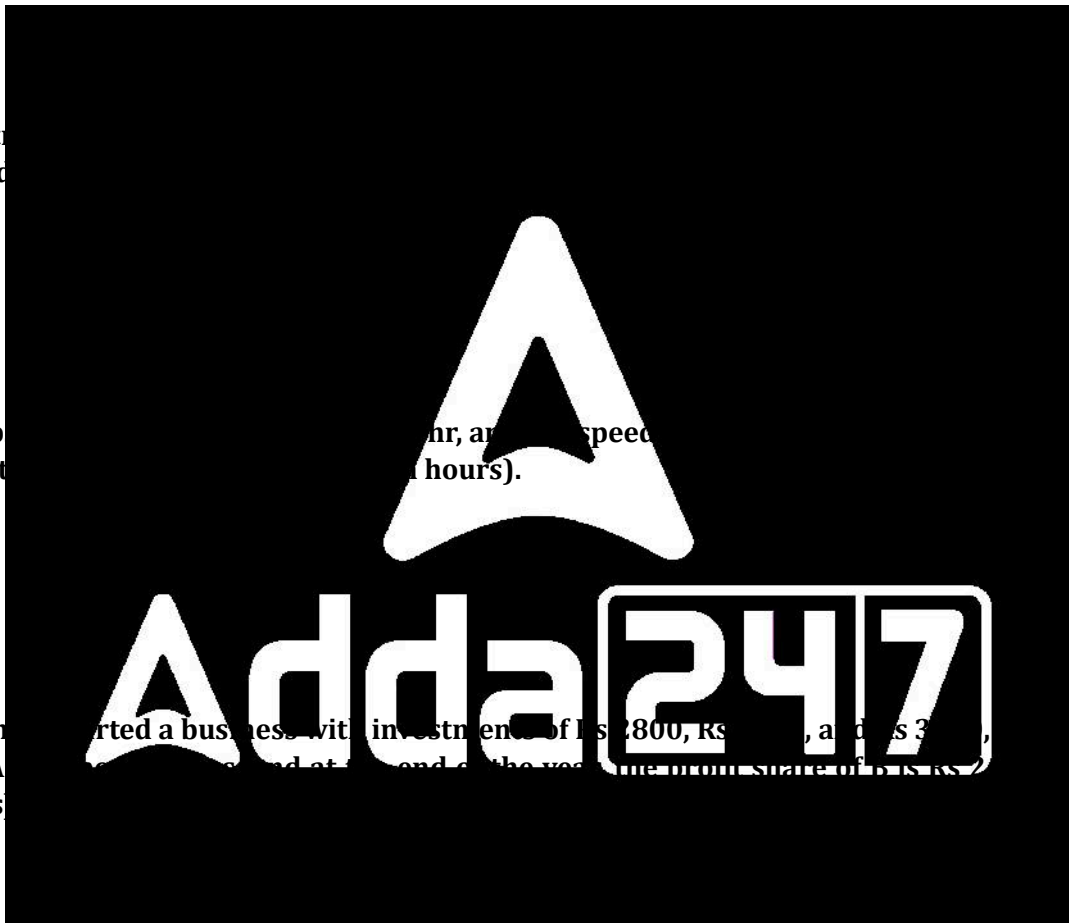
- (a) 12
- (b) 7
- (c) 5
- (d) 10
- (e) 8

Q57. A, B, and C started a business with investments of Rs 2800, Rs 3200, and Rs 3600 respectively. After 8 months, A withdrew his share and at the end of the year, the profit share of B is Rs 2400. Find the total profit (in Rs).

- (a) 4080
- (b) 4480
- (c) 4980
- (d) 4890
- (e) 4908

Q58. A man invested Rs X in compound interest at 10% p.a. for three years and received interest of Rs 1324. If he invested Rs (X + 500) in simple interest for two years at 15% p.a., then find the simple interest he received (in Rs).

- (a) 1800
- (b) 1250
- (c) 1550
- (d) 1400
- (e) 1350



Q59. Pipe A can fill a tank in 15 hours and Pipe B can fill it in 20 hours. Both pipes are opened together, but after 4 hours, Pipe A is closed. Find the total time (in hours) taken to fill the tank.

- (a) $14\frac{2}{3}$
- (b) $14\frac{1}{3}$
- (c) $16\frac{2}{3}$
- (d) $12\frac{2}{3}$
- (e) $15\frac{1}{3}$

Q60. Two trains start from the same point at the same time and travel in opposite directions at 64 km/h and 72 km/h respectively. After how many hours will they be 528 km apart?

- (a) 40/7
- (b) 60/7
- (c) 44/7
- (d) 66/7
- (e) 70/7

Directions (Q61-Q64): In each question, a sequence of numbers is given. You have to place the correct number in the place of question mark.

Q61. 2, 4,

- (a) 24
- (b) 48
- (c) 60
- (d) 72
- (e) 84

Q62. 1200, 1500, 1800, 2100, 2400, ?

- (a) 128
- (b) 112.5
- (c) 225
- (d) 227.5
- (e) 126.5

Q63. 1600, 1088, 1039, 823, 798, ?

- (a) 754
- (b) 714
- (c) 704
- (d) 724
- (e) 734

Q64. 147, ?, 111, 88, 59, 28

-
- (a) 130
(b) 126
(c) 128
(d) 133
(e) 116

Q65. 148, ?, 203, 243, 294, 358, 437

- (a) 172
(b) 162
(c) 150
(d) 160
(e) 182

Directions (66-70): Choose the correct answer from the given alternatives.

Q66. $50 - 45 + 145 = 2.5 \times ?$

- (a) 50
(b) 60
(c) 30
(d) 20
(e) 10

Q67. $\sqrt{225} \div \sqrt{25} \times 6 = ?\% \text{ of } 200$

- (a) 6
(b) 9
(c) 12
(d) 4
(e) 15

Q68. $16 \times 25 + 280 \div (25)^2 = ?\% \text{ of } ?$

- (a) 180
(b) 260
(c) 220
(d) 240
(e) 300

Q69. $\sqrt{49} \times \sqrt{196} + 430 = (?)^2 - 48$

- (a) 34
(b) 14
(c) 16
(d) 26
(e) 24

Q70. $118 + \sqrt{484} + \frac{6}{13} \times 260 + ? = (17)^2$

-
- (a) 29
(b) 31
(c) 27
(d) 39
(e) 19

Q71. $108 \div 3 \times 5 - 225 \div 9 \times 4 = 400\%$ of ?

- (a) 50
(b) 10
(c) 30
(d) 20
(e) 40

Q72. 40% of 825 = $16\frac{2}{3}\%$ of 1260 + ?

- (a) 120
(b) 140
(c) 160
(d) 100
(e) 180

Q73. $18 \div 1.5 + 153 \div 17 + \sqrt{256} = \frac{629}{?}$

- (a) 9
(b) 19
(c) 27
(d) 7
(e) 17

Q74. $(110 + 70 - \sqrt{6400}) \div 25 + ? = (4)^2$

- (a) 24
(b) 14
(c) 12
(d) 22
(e) None of the above.

Q75. $\frac{25\% \text{ of } 680}{50\% \text{ of } 340} = ?$

- (a) 5
(b) 4
(c) 3
(d) 2
(e) 1

Q76. 15% of 60 of 36000 = $12 \times ?^3$

-
- (a) 25
(b) 40
(c) 10
(d) 20
(e) 30

Q77. $\frac{170}{34} \div \frac{25}{5} \div \frac{742}{2226} = ?$

- (a) 7
(b) 5
(c) 4
(d) 2
(e) 3

Q78. $\frac{4}{10.5} \times \sqrt{441} - \sqrt{25} = \sqrt{?}$

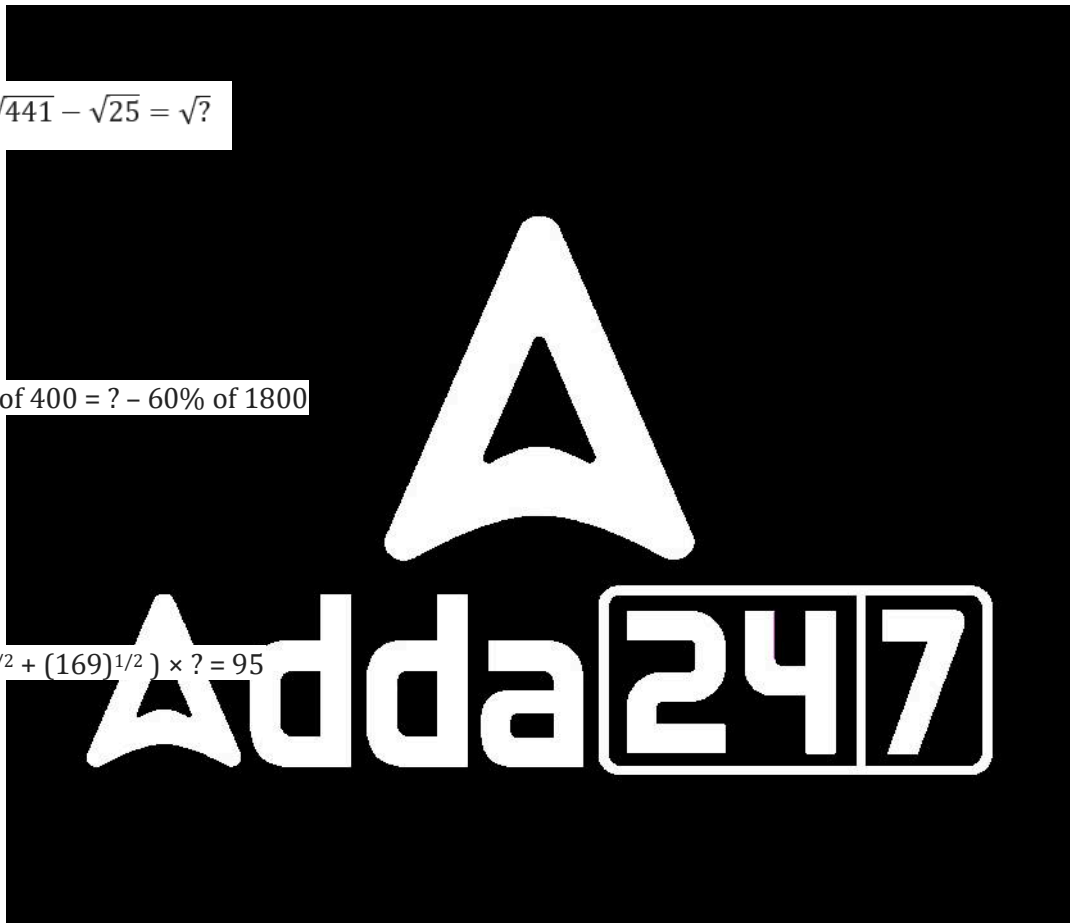
- (a) 81
(b) 9
(c) 1
(d) 25
(e) 49

Q79. 12.5% of 400 = ? - 60% of 1800

- (a) 1150
(b) 1160
(c) 1170
(d) 1190
(e) 1130

Q80. $((36)^{1/2} + (169)^{1/2}) \times ? = 95$

- (a) 5
(b) 4
(c) 3
(d) 2
(e) 1



Solutions

S1. Ans. (d)

S2. Ans. (a)

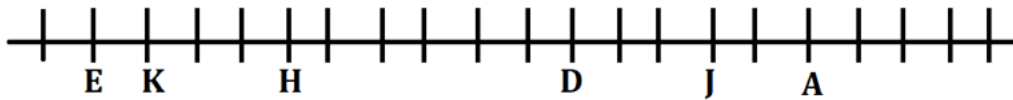
S3. Ans. (b)

S4. Ans. (d)

S5. Ans. (a)

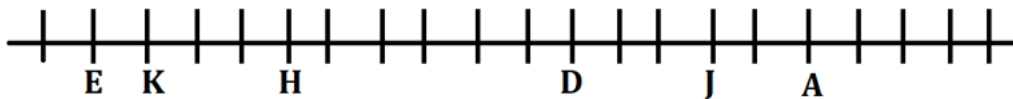
S6. Ans. (c)

Sol.



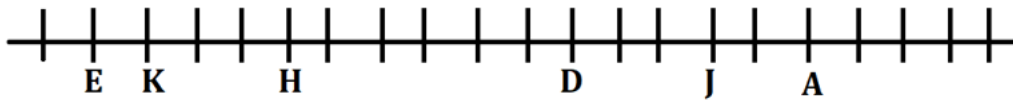
S7. Ans. (d)

Sol.



S8. Ans. (e)

Sol.



S9. Ans. (b)

Sol.

I. $R > W$ (False)

II. $K < G$ (True)

S10. Ans. (d)

Sol.

I. $P < O$ (True)

II. $O \geq B$ (True)

S11. Ans. (e)

Sol.

I. $P > L$ (False)

II. $N < R$ (False)

S12. Ans. (a)

Sol.

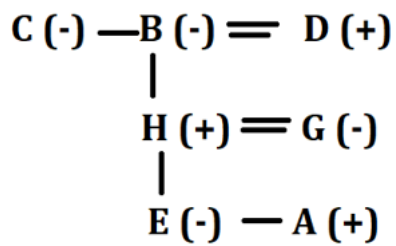
I. $X > B$ (True)

II. $Z \leq E$ (False)

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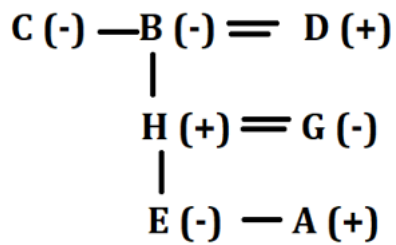
S13. Ans. (e)

Sol.



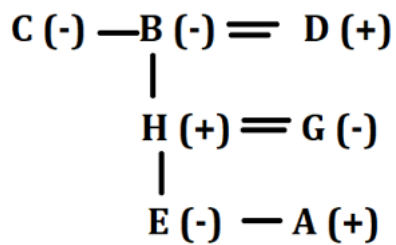
S14. Ans. (a)

Sol.



S15. Ans. (c)

Sol.



S16. Ans. (a)

Sol.

5693728

9876532

S17. Ans. (a)

Sol.

Boxes
B
A
E
C
D
G
F

S18. Ans. (b)

Sol.

Boxes
B
A
E
C
D
G
F

S19. Ans. (e)

Sol.

Boxes
B
A
E
C
D
G
F

S20. Ans. (c)

Sol.

Boxes
B
A
E
C
D
G
F



S21. Ans. (c)

Sol.

Boxes
B
A
E
C
D
G
F

S22. Ans. (c)

Sol.

Before: 492 625 381 967 154

After: 294 **526** 183 769 451

S23. Ans. (c)

Sol.

Before: 492 625 381 967 154

After: 249 **256** 138 **679** 145

$679 + 256 = 935$

S24. Ans. (d)

Sol.

492 625 381

$8 + 6 = 14$

S25. Ans. (d)

Sol.

Before: 492 6

After: 494 62

S26. Ans. (b)

Sol.

Months
March
April
May
June
July
August
September

S27. Ans. (a)

Sol.

Months	Persons
March	G
April	E
May	C
June	F
July	B
August	D
September	A



S28. Ans. (d)

Sol.

Months	Persons
March	G
April	E
May	C
June	F
July	B
August	D
September	A

S29. Ans. (e)

Sol.

Months
March
April
May
June
July
August
September

S30. Ans. (b)

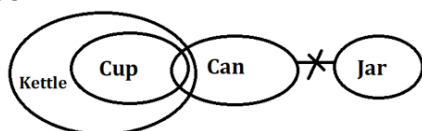
Sol.

Months
March
April
May
June
July
August
September



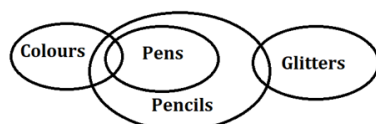
S31. Ans. (a)

Sol.



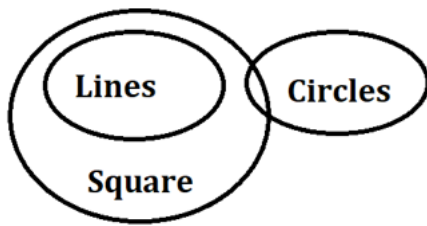
S32. Ans. (b)

Sol.



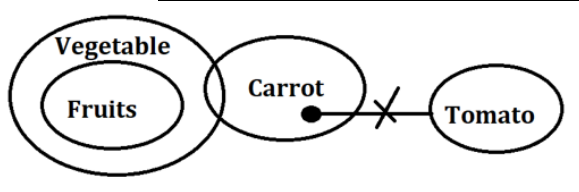
S33. Ans. (e)

Sol.



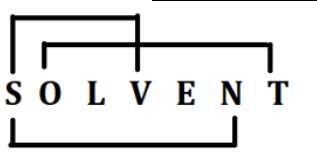
S34. Ans. (b)

Sol.



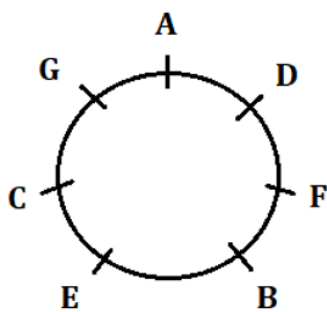
S35. Ans. (d)

Sol.



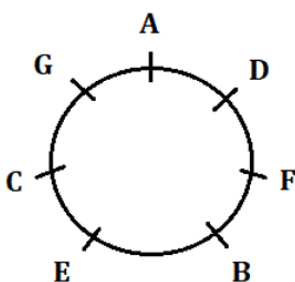
S36. Ans. (d)

Sol.



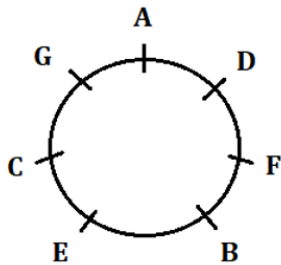
S37. Ans. (a)

Sol.



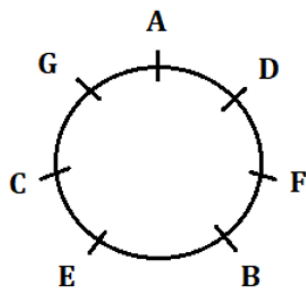
S38. Ans. (e)

Sol.



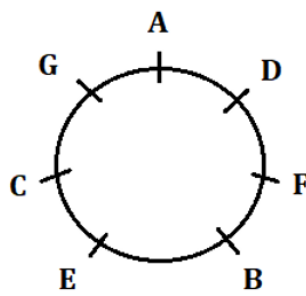
S39. Ans. (c)

Sol.



S40. Ans. (b)

Sol.



S41. Ans. (d)

Sol. Required answer = $120+100 : 110 = 220 : 110 = 2:1$

S42. Ans. (a)

Sol. Required answer = $\frac{100+80}{200} \times 100 = 90\%$

S43. Ans. (b)

Sol. Total marks obtained by A = $120+100 +130+80+130+90 = 650$

Required answer = $\frac{3}{3+6+4} \times 650 = 150$

S44. Ans. (c)

Sol. Required answer = $\frac{100+132+130+150+80}{5} = 118.4$

S45. Ans. (d)

Sol. Required answer = $(130+150) - (100 + 40) = 140$

S46. Ans. (c)

Sol. Required answer = $(50+125+200+150+100)-(25+100+150+50+200) = 625-525 = 100$

S47. Ans. (e)

Sol. Required

S48. Ans. (a)

Sol.

Online classes

Required an

S49. Ans. (c)

Sol. Required answer = $\frac{50+100}{150} \times 100 = 100\%$

S50. Ans. (a)

Sol.

Online classes taken by students on Sunday = $\frac{4}{5} \times 100 = 80$

Required answer = $\frac{100-80}{100} \times 100 = 20\%$

S51. Ans (b)

Sol. Information Given in the Question.

Total mixture

Initial ratio

After adding

Find the qua

Detailed Explanation:

Initial quantities of milk and water

Ratio = 2 : 5

Total = 42 liters

Total parts = 2 + 5 = 7

Milk = $(2/7) \times 42 = 12$ liters

Water = $(5/7) \times 42 = 30$ liters

Let milk added = x liters

New milk = 12 + x liters

Water = remains 30 liters

New ratio (Water : Milk) = 1 : 4

So,

$$\frac{30}{12+x} = \frac{1}{4}$$

$$4 \times 30 = 1 \times (12 + x)$$

$$120 = 12 + x$$

$$x = 108$$

S52. Ans (b)

Sol. Information Given in the Question:

A + B can complete the work in 15 days

B alone can complete the work in 36 days

B leaves 6 d

Concept/Formula

Work = Total

Work done =

Efficiency =

Detailed Ex

Let the total

Efficiency of

Efficiency of

So, Efficiency

Let total time

So, B works

Total work =

$$\Rightarrow 7T + 5(T - 6)$$

$$\Rightarrow 7T + 5T - 30$$

$$\Rightarrow 12T = 210$$

$$\Rightarrow T = 17.5 \text{ d}$$

S53. Ans (a)

Sol. Inform

Breadth is 2

Perimeter of

Concept/Formula Used in the Question:

Perimeter of rectangle = $2 \times (\text{Length} + \text{Breadth})$

Area of rectangle = $\text{Length} \times \text{Breadth}$

Detailed Explanation:

Let the length of the rectangle be Lcm.

Then the breadth = 0.75Lcm

$$\text{Perimeter} = 2 \times (L + 0.75L)$$

$$= 2 \times 1.75L = 3.5L$$

Given perimeter = 70

So,

$$3.5L=70$$

$$L = \frac{70}{3.5} = 20 \text{ cm}$$

$$\text{Now, breadth} = 0.75 \times 20 = 15 \text{ cm}$$

$$\text{Area} = \text{Length} \times \text{Breadth} = 20 \times 15 = 300 \text{ cm}^2$$

S54. Ans (c)

Sol. Information Given in the Question:

Discount = 20% on Marked Price

Profit = Rs 450

Marked Price - Cost Price = Rs 1900

Concept/Formula Used in the Question:

Selling Price

Profit = Selling

Selling Price

Cost Price =

Detailed Ex

Let the Cost

Then, Marke

Selling Price = (900)

Given: Profit

SP = CP + 45

= x + 450

So,

$$0.8(x + 1900) = x + 450$$

$$0.8x + 1520 = x + 450$$

$$1520 - 450 = x - 0.8x$$

$$1070 = 0.2x$$

$$x = \frac{1070}{0.2} = 5350$$

S55. Ans (c)

Sol. Inform

A covers 54

Speed of A is

Need to find distance travelled by B in 4 hours

Concept/Formula Used in the Question:

Speed = Distance / Time

$$A = 120\% \text{ of } B \rightarrow A = \frac{6}{5} \times B$$

Distance = Speed × Time

Detailed Explanation:

Speed of A = $54 \div 2 = 27 \text{ km/h}$

Let speed of B = x

$$\text{Given: } \frac{6}{5} \times x = 27$$

$$x = \frac{27 \times 5}{6} = \frac{135}{6} = 22.5 \text{ km/h}$$

$$\text{Distance travelled by B in 4 hours} = 22.5 \times 4 = 90 \text{ km}$$

S56. Ans (e)

Sol. Information Given in the Question:

Upstream speed = 6 km/h

Speed of stream = 2 km/h

Distance to cover downstream = 80 km

Concept/Formula Used in the Question:

Upstream speed = Boat speed in still water - Stream speed

Downstream speed = Boat speed in still water + Stream speed

Time = Distance / Speed

Detailed Explanation:

Let speed of

Given upstre

B = 8 km/h

Then, down

Time = 80 /

S57. Ans (d)

Sol. Inform

A invested R

B invested R

C invested R

B's share of

Concept/For

Profit Share

Total Profit

Detailed Ex

Effective inv

A: 2800×8

B: 5400×12

C: 3600×12

Total ratio =

= 28 : 81 : 54

Total ratio sum = 28 + 81 + 54 = 163 parts

B's share = 81 parts = Rs 2430

So,

Total Profit = $\frac{2430 \times 163}{81} = 4890$ Rs

S58. Ans (e)

Sol. Information Given in the Question:

Compound Interest Rate = 10% p.a., Time = 3 years, CI = Rs 1324

Simple Interest Rate = 15% p.a., Time = 2 years, Principal = (X + 500)

Concept/Formula Used in the Question:

Compound Interest:

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

Compound Interest = Amount – Principal

$$\text{Simple Interest} = \frac{P \times R \times T}{100}$$

A = Amount

P = Principal

R = Rate of interest

T = Time period

Detailed Explanation:

Amount after 2 years

$$1324 = X \times 1.3$$

$$1324 = 0.331X$$

$$X = \frac{1324}{0.331}$$

$$X = 4000$$

So, second investment = $X + 500$

$$= 4000 + 500 = 4500 \text{ Rs}$$

$$\text{Simple Interest} = \frac{4500 \times 15 \times 2}{100} = 1350 \text{ Rs}$$

S59. Ans (a)

Sol. Inform

Pipe A fills the tank in 15 hours

Pipe B fills the tank in 20 hours

Both opened for 4 hours, then only B opens for 16 hours

Concept/Formula Used in the Question

Work done = (Efficiency × Time)

Total work = 60 units

Remaining work = 32 units

Time = Remaining work ÷ Efficiency

Detailed Explanation:

Let total capacity of the tank (LCM of 15 and 20) = 60 units

A's efficiency = $60 \div 15 = 4$ units/hour

B's efficiency = $60 \div 20 = 3$ units/hour

Work done in first 4 hours by A and B together:

$$\text{Total work} = (4 + 3) \times 4 = 7 \times 4 = 28 \text{ units}$$

Remaining work = $60 - 28 = 32$ units

B alone fills 3 units/hour

$$\text{Time to fill 32 units} = 32 \div 3 = 10\frac{2}{3} \text{ hours}$$

$$\text{Total time} = 4 \text{ (with A \& B)} + 10\frac{2}{3} = 14\frac{2}{3} \text{ hours}$$

S60. Ans (b)

Sol. Information Given in the Question:

Length of Train A = 180 m

Length of Train B = 120 m

Speed of Train A = 54 km/h

Speed of Train B = 72 km/h

Direction = Opposite

Concept/Formula Used in the Question:

When two objects move in opposite directions, relative speed = sum of individual speeds

Convert km/h to m/s $\rightarrow$ multiply by $5/18$

Time = Total

Total Distance

Detailed Ex

Convert spe

54 km/h = 5

72 km/h = 7

Relative spe

Total distance

Time = Distance / Speed = $300/35 = \frac{60}{7}$ seconds

S61. Ans. (b)

Sol. Pattern of

$2 \times 2 = 4$

$4 \times 3 = 12$

$12 \times 4 = 48$

$48 \times 5 = 240$

$240 \times 6 = 1440$

S62. Ans. (b)

Sol. Pattern of

$1200 \times 1/4 = 300$

$300 \times 2/4 = 150$

$150 \times 3/4 = 112.5$

$112.5 \times 4/4 = 112.5$

$112.5 \times 5/4 = 140.625$

S63. Ans. (e)

Sol.

Pattern of series –

$1600 - 8^3 = 1088$

$1088 - 7^2 = 1039$

$1039 - 6^3 = 823$

$823 - 5^2 = 798$

$798 - 4^3 = 734$

S64. Ans. (a)

Sol. Pattern of series –

Subtraction of consecutive prime number

$$147 - 17 = 130$$

$$130 - 19 = 111$$

$$111 - 23 = 88$$

$$88 - 29 = 59$$

$$59 - 31 = 28$$

S65. Ans (a)

Sol. Pattern of series –

148	172	203	243	294	358	437
+24	+31	+40	+51	+64	+79	
	+7	+9	+11	+13	+15	

S66. Ans. (b)

Sol.

$$50 - 45 + 145 = 2.5 \times ?$$

$$150 = 2.5 \times ?$$

$$60 = ?$$

S67. Ans. (b)

Sol.

$$\sqrt{225} \div \sqrt{25} \times 6 = ?\% \text{ of } 200$$

$$\frac{15 \times 6}{5 \times 2} = ?$$

$$? = 9$$

S68. Ans. (c)

Sol.

$$16 \times 25 + 280 - (25)^2 = 25\% \text{ of } ?$$

$$(400 + 280 - 625) \times \frac{100}{25} = ?$$

$$(680 - 625) \times 4 = ?$$

$$55 \times 4 = ?$$

$$? = 220$$

S69. Ans. (e)

Sol.

$$\sqrt{49} \times \sqrt{196} + 430 = (?)^2 - 48$$

$$7 \times 14 + 430 + 48 = (?)^2$$

$$576 = (?)^2$$

$$? = 24$$

S70. Ans. (a)

Sol.

$$118 + \sqrt{484} + \frac{6}{13} \times 260 + ? = (17)^2$$

$$118 + 22 + 6 \times 20 + ? = 289$$

$$? = 289 - 140 - 120$$

$$? = 29$$

S71. Ans. (d)

Sol.

$$108 \div 3 \times 5 - 225 \div 9 \times 4 = 400\% \text{ of } ?$$

$$\frac{108}{3} \times 5 - \frac{225}{9} \times 4 = \frac{400}{100} \times ?$$

$$180 - 100 = 4 \times ?$$

$$? = \frac{80}{4}$$

$$? = 20$$

S72. Ans. (a)

Sol.

$$40\% \text{ of } 825 = 16\frac{2}{3}\% \text{ of } 1260 + ?$$

$$\frac{40}{100} \times 825 = \frac{1}{6} \times 1260 + ?$$

$$330 = 210 + ?$$

$$? = 120$$

S73. Ans. (e)

Sol.

$$18 \times \frac{3}{2} + \frac{153}{17} + 16 = \frac{629}{?}$$

$$12 + 9 + 16 = \frac{629}{?}$$

$$? = \frac{629}{37}$$

$$? = 17$$

S74. Ans. (c)

Sol.

$$(110 + 70 - \sqrt{6400}) \div 25 + ? = (4)^2$$

$$\frac{110+70-80}{25} + ? = 16$$

$$? = 16 - \frac{100}{25}$$

$$? = 16 - 4$$

$$? = 12$$

S75. Ans. (e)

Sol.

$$\frac{25 \times 680}{50 \times 340} = ?$$

$$1 = ?$$

S76. Ans. (e)

Sol.

$$\frac{15 \times 60 \times 36000}{12 \times 100} = ?^3$$

$$27000 = ?^3$$

$$30 = ?$$

S77. Ans. (e)

Sol.

$$\frac{170}{34} \times \frac{5}{25} \times \frac{2226}{742} = ?$$

$$\frac{34}{34} \times \frac{2226}{742} = ?$$

$$3 = ?$$

S78. Ans. (b)

Sol.

$$\frac{4}{10.5} \times \sqrt{441} - \sqrt{25} = \sqrt{?}$$

$$8 - 5 = \sqrt{?}$$

$$3 = \sqrt{?}$$

$$9 = ?$$

S79. Ans. (e)

Sol.

$$50 = ? - 1080$$

$$1130 = ?$$

S80. Ans. (a)

Sol.

$$(6+13) \times ? = 95$$

$$5 = ?$$