

IBPS Clerk Prelims Memory Based (Quantitative Aptitude)



PLUTUS
ACADEMY

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Directions (36-40): What will come in the place of question (?) mark in the following number series.

Q36. 200, 193, 179, 158, ?, 95

- (a) 135
- (b) 133
- (c) 132
- (d) 130
- (e) 128

Q37. 3, 43, 81, 115, 143, ?

- (a) 163
- (b) 172
- (c) 166
- (d) 160
- (e) 168

Q38. 1, 6, 25, 76, 153, ?

- (a) 152
- (b) 154
- (c) 153
- (d) 155
- (e) 156



Q39. 50, 54, 45, 61, 36, ?

- (a) 66
- (b) 72
- (c) 75
- (d) 80
- (e) 84

Q40. 9, 45, 180, 540, ?, 1080

- (a) 720
- (b) 900
- (c) 1080
- (d) 1200
- (e) 960

Q41. If the sum of upstream and downstream speed is 36 km/hr and the speed of the current is 3km/hr. Then find time taken to cover 52.5 km in downward?

- (a) 2 hr
- (b) 2.5 hr
- (c) 3 hr
- (d) 3.5 hr
- (e) 4 hr

Q42. A sum becomes 1.6 times of itself in five years at simple rate of interest. Find rate of interest per annum?

- (a) 10%
- (b) 12.5%
- (c) 15%
- (d) 12%
- (e) 8.5%

Directions (43-52): Calculate the exact value of the 'x' in the given following questions.

Q43. $x^2 + (9^2 + 34) \div 5 = 39$

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

Q44. $6 \times 16 \times 5 \div 3 - x^2 = 96$

- (a) 6
- (b) 7
- (c) 8
- (d) 9
- (e) 5



Q45. $\sqrt{124 + x + 169} = 18$

- (a) 27
- (b) 28
- (c) 29
- (d) 30
- (e) 31

Q46. $28^2 - x^3 = 7^3 + 225$

- (a) 6
- (b) 8
- (c) 4
- (d) 7
- (e) 5

Q47. $298 - 13^2 - 2^3 = x \times 11$

- (a) 51
- (b) 41
- (c) 21
- (d) 11
- (e) 31

Q48. $\sqrt[3]{729} + 3\frac{3}{5} \div x = \sqrt{16 \times 9}$

- (a) 1
- (b) 1.4
- (c) 1.2
- (d) 1.6
- (e) 2

Q49. $x\% \text{ of } 300 + \sqrt{256} = 243 \div 3 + 7$

- (a) 18
- (b) 24
- (c) 16
- (d) 28
- (e) 32

Q50. $x \times 3 \div 8 = \sqrt[3]{512} \times \sqrt{12^2}$

- (a) 256
- (b) 512
- (c) 64
- (d) 128
- (e) 320



Q51. $136 \div 2^2 \times x = 17\% \text{ of } 500 \div 10$

- (a) 1
- (b) 0.5
- (c) 0.25
- (d) 0.125
- (e) 1.25

Q52. $1836 \div x \div 9 = 12$

- (a) 9
- (b) 11
- (c) 13
- (d) 15
- (e) 17

Q53. Ratio of present ages of two persons A and B is 3:2 and after four years ratio of their age (B : A) become 7:10. Then find the present age of B?

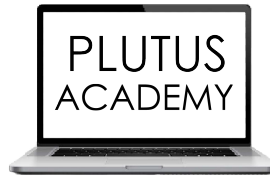
- (a) 20 years
- (b) 18 years
- (c) 24 years
- (d) 36 years
- (e) 30 years

Q54. The difference between Circumference of circle A and diameter is 90 cm . If Radius of Circle B is 7 cm less than circle A then find area of Circle B?

- (a) 556 cm²
- (b) 616 cm²
- (c) 588 cm²
- (d) 532 cm²
- (e) 630 cm²

Q55. There are 40 children in a class in which boys are 4 more than the girls. Average weight of all the students is 42.5 kg and the average weight of all the girls is 48 kg then find the average weight of all the boys.

- (a) 39.5 kg
- (b) 38 kg
- (c) 40.5 kg
- (d) 36.75 kg
- (e) 40.25 kg



Directions (56-60): In each question two equations numbered (I) and (II) are given. Student should solve both the equations and mark appropriate answer.

- (a) If $x=y$ or no relation can be established
- (b) If $x>y$
- (c) If $x<y$
- (d) If $x\geq y$
- (e) If $x\leq y$

Q56. I. $8x^2 + 6x + 1 = 0$

II. $3y^2 + 7y + 2 = 0$

Q57. I. $x^2 = 196$

II. $y^2 - 26y + 169 = 0$

Q58. I. $9x^2 - 12x + 4 = 0$

II. $8y^2 - 9y + 1 = 0$

Q59. I. $x^2 - 15x + 56 = 0$

II. $y = \sqrt[3]{512}$

Q60. I. $3x^2 + 10x + 8 = 0$

II. $2y^2 + 3y + 1 = 0$

Q61. A man invested 15% of his monthly income in LIC and remaining gave to his mother. Mother spend 10 % of it in household expenses and she had left with Rs 30,600 then find the salary of man?

- (a) Rs 37,500
- (b) Rs 36,000
- (c) Rs 38,000
- (d) Rs 42,000
- (e) Rs 40,000

Q62. If 7 marks are awarded to right answer and 4 marks are penalty for wrong answer. Then Prabhat's score was 263. If he attempted 58 questions then find number of correctly attempted questions?

- (a) 45
- (b) 42
- (c) 48
- (d) 40
- (e) 50



Q63. In a city, 68% of population is literate in which ratio of male to female is 11:6. And ratio of illiterate male to female is 3: 1 . Find the ratio of literate female to illiterate female in that city.

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

Q64. Ratio of length to breadth of a rectangle is 4:3. If the area of that rectangle is 108 cm^2 and breadth of this rectangle is equal to the side of a square then find the area of that square.

- (a) 49 cm^2
- (b) 100 cm^2
- (c) 64 cm^2
- (d) 81 cm^2
- (e) 121 cm^2

Q65. A is 1.5 times as efficient as that of B and C takes half time as compared to that of A. If A and B takes $2\frac{2}{5}$ days to complete half of the work then find the time taken by A and C together to complete the whole work?

- (a) $2\frac{1}{3}$ days
- (b) $3\frac{1}{3}$ days
- (c) $1\frac{1}{3}$ days
- (d) $1\frac{2}{3}$ days
- (e) $2\frac{2}{3}$ days

Directions (66-70): Given below table shows the number of cakes of five different types sold by a shopkeeper on four different days. Study the data and answer the questions that follow:

Days/Type of Cake	A	B	C	D	E
Saturday	25	28	35	50	38
Sunday	35	65	48	42	47
Monday	38	60	40	24	29
Tuesday	46	54	55	44	30

Q66. What is the ratio of no. of cakes of type B sold by the shopkeeper on Saturday and Monday together to the no. of cakes of type E sold by him on the same days?

- (a) 72:53
- (b) 88:67
- (c) 98:73
- (d) 92:71
- (e) 90:67



Q67. What is average no. of cakes of type C sold by shopkeeper on Saturday, Sunday and Tuesday?

- (a) 38
- (b) 40
- (c) 42
- (d) 44
- (e) 46

Q68. The no. of cakes of type D and E sold together on Tuesday is what percent of the no. of cakes of type A & B sold together on Sunday?

- (a) 72%
- (b) 75%
- (c) 74%
- (d) 78%
- (e) 80%

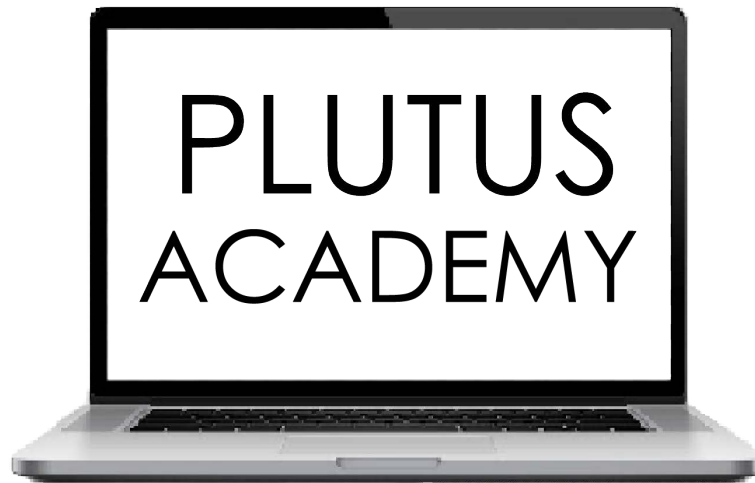
Q69. What is the difference between the total no. of cakes of all the given types sold by shopkeeper on Monday and the total no. of cakes of all the given types sold by shopkeeper on Tuesday?

- (a) 38
- (b) 44
- (c) 42
- (d) 40
- (e) 45

Q70. If the no. of cakes of type F sold by the shopkeeper in given four days is 25% more than the no. of cakes sold of type D in all the given days, then find the no. of cakes sold of type F in all the given days.

- (a) 164
- (b) 160
- (c) 180
- (d) 200
- (e) 240



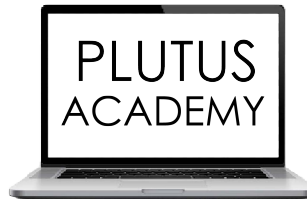


QUANTITATIVE APTITUDE

S36. Ans.(d)

Sol.

$$\begin{array}{ccccccccc} 200 & & 193 & & 179 & & 158 & & ? & & 95 \\ & \frown & & \frown & & \frown & & \frown & & \frown & \\ & 7 & & 14 & & 21 & & 28 & & 35 & \end{array}$$



S37. Ans.(a)

Sol.

$$\begin{array}{ccccccccc} 3 & & 43 & & 81 & & 115 & & 143 & & ? \\ & \frown & & \frown & & \frown & & \frown & & \frown & \\ & 40 & & 38 & & 34 & & 28 & & 20 & \\ & -2 & & -4 & & -6 & & -8 & & & \end{array}$$

S38. Ans.(b)

Sol.

$$\begin{array}{ccccccccc} 1 & & 6 & & 25 & & 76 & & 153 & & ? \\ & \frown & & \frown & & \frown & & \frown & & \frown & \\ & \times 5+1 & & \times 4+1 & & \times 3+1 & & \times 2+1 & & \times 1+1 & \end{array}$$

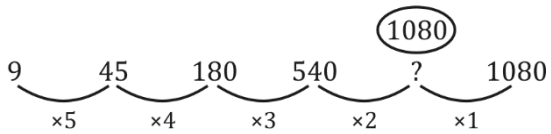
S39. Ans.(b)

Sol.

$$\begin{array}{ccccccccc} 50 & & 54 & & 45 & & 61 & & 36 & & ? \\ & \frown & & \frown & & \frown & & \frown & & \frown & \\ & 4 & & -9 & & 16 & & -25 & & 36 & \\ & +2^2 & & -3^2 & & +4^2 & & -5^2 & & +6^2 & \end{array}$$

S40. Ans.(c)

Sol.



S41. Ans.(b)

Sol. Let the speed of boat in still water be x km/hr

ATQ

$$x + 3 + x - 3 = 36$$

$$x = 18$$

$$\text{Required time} = \frac{52.5}{21} = 2.5 \text{ hr}$$

S42. Ans.(d)

Sol. Let that sum be Rs 'p' and rate of interest be 'r'% per annum

Amount= Rs 1.6p

SI= Rs 0.6p

ATQ

$$0.6p = \frac{p \times r \times 5}{100}$$

$$r = 12\%$$

S43. Ans.(b)

Sol. $x^2 + (81 + 34) \div 5 = 39$

$$x^2 + \frac{115}{5} = 39$$

$$x^2 = 39 - 23 = 16$$

$$x = 4$$



S44. Ans.(c)

Sol.

$$\frac{6 \times 16 \times 5}{3} - x^2 = 96$$

$$160 - 96 = x^2$$

$$64 = x^2$$

$$8 = x$$

S45. Ans.(e)

Sol. $\sqrt{293 + x} = 18$

$$\text{Or, } 293 + x = 324$$

$$\text{Or, } x = 324 - 293 = 31$$

S46. Ans.(a)

Sol. $784 - x^2 = 343 + 225$

$x^3 = 784 - 568 = 216$

$x = 6$

S47. Ans.(d)

Sol. $298 - 169 - 8 = x \times 11$

$121 = x \times 11$

$x = 11$

S48. Ans.(c)**Sol.**

$9 + \frac{18}{5x} = 12 \Rightarrow \frac{18}{5x} = 3$

$\Rightarrow x = 1.2$

S49. Ans.(b)

Sol. $x \times 3 + 16 = 81 + 7$

$\Rightarrow 3x = 72$

$\Rightarrow x = 24$

S50. Ans.(a)**Sol.**

$\Rightarrow \frac{3x}{8} = 8 \times 12$

$\Rightarrow 3x = 64 \times 12$

$\Rightarrow x = 256$

S51. Ans.(c)**Sol.**

$\Rightarrow \frac{136}{4} \times x = \frac{85}{10} \Rightarrow x = \frac{85 \times 4}{10 \times 136} = \frac{1}{4} = 0.25$

**S52. Ans.(e)****Sol.**

$\Rightarrow \frac{1836}{9x} = 12$

$\Rightarrow x = \frac{1836}{12 \times 9}$

$\Rightarrow x = 17$

S53. Ans.(c)**Sol.** Let the present age of A and B be $3x$ and $2x$ years respectively

ATQ

$\frac{3x + 4}{2x + 4} = \frac{10}{7}$

$x = 12$

Present age of B = 24 yr

S54. Ans.(b)**Sol.** Let radius of circle A be r cm

ATQ

$$2\pi r - 2r = 90$$

$$r = 21 \text{ cm}$$

Radius of circle B=14 cm

Area of circle B= 616 cm^2 **S55. Ans.(b)****Sol.** Let the number of girls be x Then, boys= $x+4$

ATQ

$$x+4+x=40$$

$$x=18$$

total weight of all students = $40 \times 42.5 = 1700 \text{ kg}$ total weight of girls= $18 \times 48 = 864 \text{ kg}$ weight of all boys= $1700 - 864 = 836 \text{ kg}$ average weight of all boys = $\frac{836}{22} = 38 \text{ kg}$ **S56. Ans.(a)****Sol. I.** $8x^2+6x+1=0$

$$\Rightarrow 8x^2+4x+2x+1=0$$

$$\Rightarrow (4x+1)(2x+1)=0$$

$$x = -\frac{1}{4}, -\frac{1}{2}$$

II. $3y^2+7y+2=0$

$$\Rightarrow y = -2, -\frac{1}{3}$$

No relation

S57. Ans.(a)**Sol. I.** $x^2=196$

$$x = -14, 14$$

II. $y^2-26y+169=0$

$$\Rightarrow y = 13$$

No relation

S58. Ans.(a)**Sol. I.** $9x^2-12x+4=0$

$$\Rightarrow 9x^2-6x-6x+4=0$$

$$x = \frac{2}{3}, \frac{2}{3}$$

II. $8y^2 - 9y + 1 = 0$

$$\Rightarrow y = 1, \frac{1}{8}$$

No relation



S59. Ans.(e)

Sol. I. $x^2 - 15x + 56 = 0$

$x = 8, 7$

II. $y = \sqrt[3]{512}$

$\Rightarrow y = 8$

$y \geq x$

S60. Ans.(c)

Sol. I. $3x^2 + 10x + 8 = 0$

$x = -2, -\frac{4}{3}$

II. $2y^2 + 3y + 1 = 0$

$\Rightarrow y = -1, -\frac{1}{2}$

$y > x$

S61. Ans.(e)**Sol.** Let the salary of man be Rs x Amount given to mother = $0.85x$

ATQ

$0.85x \times 0.90 = 30,600$

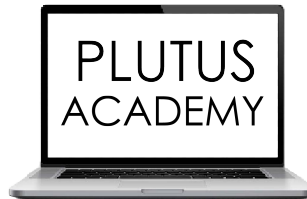
$x = \text{Rs } 40,000$

S62. Ans.(a)**Sol.** Let number of correct questions be x Then, incorrect question = $(58 - x)$

ATQ

$x \times 7 - (58 - x) \times 4 = 263$

$x = 45$

**S63. Ans.(c)****Sol.** Let the total population of that city be $100x$ Then literate population = $68x$

Literate male = $68x \times \frac{11}{17} = 44x$

Literate female = $24x$

Illiterate population = $32x$

Illiterate female = $32x \times \frac{1}{4} = 8x$

Required ratio = $\frac{24x}{8x} = 3 : 1$

S64. Ans.(d)**Sol.** Let the length and breadth of that rectangle be $4x$ and $3x$ cm respectively

ATQ

$4x \times 3x = 108$

$x = 3 \text{ cm}$

Breadth = 9 cm

Area of square = 81 cm^2

S65. Ans.(e)**Sol.** Let the efficiency of A and B be $3x$ and $2x$ unit/day respectivelyEfficiency of C = $6x$ units/day

$$\text{Total work} = \frac{12}{5} \times 2 \times 5x = 24x \text{ units}$$

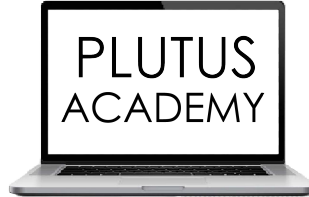
$$\text{Required time} = \frac{24x}{9} = 2\frac{2}{3} \text{ days}$$

S66. Ans.(b)**Sol.** Required ratio

$$= \frac{28 + 60}{38 + 29} = \frac{88}{67}$$

S67. Ans.(e)**Sol.** Required average

$$= \frac{35 + 48 + 55}{3} = \frac{138}{3} = 46$$

**S68. Ans.(c)****Sol.** Required percentage

$$= \frac{(44 + 30)}{(35 + 65)} \times 100 = \frac{74}{100} \times 100 = 74\%$$

S69. Ans.(a)**Sol.** Total cakes sold on Monday = $38 + 60 + 40 + 24 + 29 = 191$ Total cakes sold on Tuesday = $46 + 54 + 55 + 44 + 30 = 229$ Difference = $229 - 191 = 38$ **S70. Ans.(d)****Sol.** No. of cakes of type F = $\frac{125}{100} \times (50 + 42 + 24 + 44)$

$$= \frac{5}{4} \times 160 = 200$$