1. $z = \frac{1}{1-\cos\theta - i\sin\theta}$, then Re(z) is equal to

(1) 1 (2) $\cot\frac{\theta}{2}$

(3) $\frac{1}{2}$ (4) $\frac{1}{2}.\cot\theta$

2. If $(x + iy)^{1/3} = a + ib$, $x, y, a, b \in R$, then $x/a + y/b$ is equal to

(1) $a - b$ (2) $4(a^2 - b^2)$

(3) $a + b$ (4) $4(a^2 + b^2)$

3. How many words can be formed from the letters of the word 'DAUGHTER' so that the vowels are never together ?

(1) $8! - 6!$ (2) 40320

(3) 36000 (4) 4320

4. The equation of the smallest degree with the real coefficient having (1 + i) as one of the roots is

(1) $x^2 + x + 2 = 0$ (2) $x^2 + x + 1 = 0$

(3) $x^2 - 2x + 2 = 0$ (4) $x^2 + 2x + 2 = 0$

5. A rod AB of length 15 cm rests in between two coordinate axis in such a way that the end point A lies on x-axis and end point B lies on y-axis. A point P is taken on the rod in such a way that AP = 6cm. If the locus of P is an ellipse, then its eccentricity(e) is :

(1) $\frac{\sqrt{5}}{3}$ (2) $\sqrt{\frac{5}{7}}$

(3) $\frac{5}{3}$ (4) $\sqrt{\frac{117}{81}}$

6. A line passes through the point (3, -2). The locus of the middle point of the portion of the line intercepted between the axis is :

(1) $3x - 2y = 2xy$ (2) $\frac{2x}{3} + \frac{y}{1} = 1$

(3) $3y - 2x = 2xy$ (4) $3x - 2y = 2$

7. The equation of the parabola, whose vertex is at (2, 1) and directrix is $x = y - 1$, is given by :

(1) $x^2 + y^2 - 14x + 2y + 2xy + 17 = 0$ (2) $x^2 - 14x = 4xy$

(3) $3y - 2x = 2xy$ (4) $3x - 2y = 2$

8. The domain of the function $f(x)=\sqrt{x-3-2\sqrt{x-4}}-\sqrt{x-3+2\sqrt{x-4}}$ is, where 'f' be a real values of real variable

(1) $[2, \infty)$ (2) $[4, \infty)$

(3) R^+ (4) $(-\infty, 4]$

9. The 4th term from end in the expansion of $\left(\frac{3}{x^2}-\frac{x^3}{6}\right)^7$ is

(1) $\frac{35}{48}x^5$ (2) $\frac{35}{32}x^6$

(2) $\frac{35}{32}x^5$ (4) $\frac{35}{48}x^6$

10. If $\frac{3+2i\sin\theta}{1-2\sin\theta}$ is a purely real then the value of θ is (n being integer) :

(1) $\theta=(n+1)\frac{\pi}{2}$ (2) $\theta=n\pi$

(3) $\theta=\frac{n}{2}$ (4) $\theta=\frac{n\pi}{2}$

11. The eccentricity of the conic $9x^2 - 16y^2 = 144$ is :

(1) $\frac{5}{4}$ (2) $\frac{\sqrt{7}}{4}$

(3) $\frac{3}{5}$ (4) $\frac{5}{3}$

12. The probability that at least one of the events A and B occurs is 0.6. If A and B occur simultaneously with probability 0.2, then $P(\bar{A}) + P(\bar{B})$ is :

(1) 1.2 (2) 1.6

(3) 0.8 (4) 0.4

13. The coefficient of x^6y^3 in the expansion of $(x + 2y)^9$ is :

(1) 670 (2) 1348

(3) 674 (4) 672

14. The value of $\frac{i^{592}+i^{590}+i^{588}+i^{586}+i^{584}}{i^{582}+i^{580}+i^{576}+i^{574}}$ is $(i=\sqrt{-1})$:

(1) -1

(2) 0

(3) -2

(4) 1

15. Two dice are thrown, the probability of getting an odd number on the first die and multiple of 3 on the other, is :

(1) $\frac{1}{5}$ (2) $\frac{1}{6}$

(3) $\frac{5}{6}$ (4) $\frac{1}{3}$

16. If $y = \sin^{-1} x + \sin^{-1}\sqrt{1-x^2}$ and $x \in (-1, 0)$, then $\frac{dy}{dx}$ is equal to

(1) $-\frac{1}{\sqrt{1-x^2}}$ (2) 0

(3) $\frac{2}{\sqrt{1-x^2}}$ (4) $\frac{1}{\sqrt{1-x^2}}$

17. The value of $\int \frac{x^2+1}{(x+1)^2} dx$ is (C being constant of integration) :

(1) $x - 2\log|x+1| - \frac{2}{x+1} + C$ (2) $x - \frac{2}{x+1} + C$

(3) $x - \log|x+1| - \frac{1}{x+1} + C$ (4) $\log|x+1| + \frac{1}{(x+1)^2} + C$

18. In the first four papers each of 100 marks, Rishi got 95, 72, 83 marks. If he wants an average of greater than or equal to 75 marks and less than 80 marks, the range of marks he should score in the fifth paper, is

(1) between 60 and 70 marks
(2) between 52 and 77 marks
(3) between 70 and 80 marks
(4) between 55 and 75 marks

19. If 'f' is function satisfying $f(x + y) = f(x).\ f(y)$ for all $x, y \in N$ such that $f(1) = 3$ and $\sum_{x=1}^{n} f(x) = 120$, then the value of 'n' is

(1) 7
(2) 4
(3) 6
(4) 3

20. If $A = \begin{bmatrix} 1 & na \\ 0 & 1 \end{bmatrix}$, then A^n is equal to $(n \in N)$:

(1) $\begin{bmatrix} 1 & na \\ 0 & 1 \end{bmatrix}$
(2) $\begin{bmatrix} n & na \\ 0 & 1 \end{bmatrix}$
(3) $\begin{bmatrix} 1 & na \\ 0 & 1 \end{bmatrix}$
(4) $\begin{bmatrix} 1 & n^2a \\ 0 & 1 \end{bmatrix}$

21. The locus of the point which moves so that the sum of its distances from (3, 0) and (-3, 0) is less than 9, is :

(1) $20x^2 + 36y^2 < 405$

(2) $\frac{x^2}{36} + \frac{y^2}{16} < 1$

(3) $16x^2 + 20y^2 < 399$

(4) $36x^2 + 20y^2 < 405$

22. The value of $\int_0^{\frac{\pi}{4}} \sqrt{1+\sin 2x}\,dx$ is

(1) 0

(2) $1-\sqrt{2}$

(3) $\sqrt{2}-1$

(4) 1

23. If $x > 0$, then sum of the infinite series

$$\frac{1}{1+x} - \frac{1-x}{(1+x)^2} + \frac{(1-x)^2}{(1+x)^3} - \frac{(1-x)^3}{(1+x)^4} + \ldots\ldots\infty \text{, is}$$

(1) $\frac{1}{2}$

(2) 1

(3) 0

(4) $\frac{3}{2}$

24. The sum of all 3-digit numbers which leave the remainder 2, when divided by 3, is :

(1) 154900
(2) 164850
(3) 154850
(4) 109900

25. The foci of the hyperbola coincide with the foci of the ellipse $\frac{x^2}{25}+\frac{y^2}{9}=1$. If eccentricity of the hyperbola is 2, then equation of the hyperbola is :

(1) $\frac{x^2}{36}-\frac{y^2}{16}=1$
(2) $\frac{x^2}{12}-\frac{y^2}{4}=1$
(3) $\frac{x^2}{16}-\frac{y^2}{36}=1$
(4) $\frac{x^2}{4}-\frac{y^2}{12}=1$

26. The number of diagonals with n-sides polygon is :

(1) $\frac{n(n-1)}{2}$
(2) $\frac{n(n+1)}{2}$
(3) $\frac{n(n-2)}{2}$
(4) $\frac{n(n-3)}{2}$

27. Find the least positive integral value of 'k', if

$$\begin{bmatrix} \cos\frac{2\pi}{7} & -\sin\frac{2\pi}{7} \\ \sin\frac{2\pi}{7} & \cos\frac{2\pi}{7} \end{bmatrix}^k = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

(1) 6
(2) 5
(3) 7
(4) 8

28. The principal wants to arrange 5 students on the platform such that the boy Salim occupies the second position and the girl Sita is always adjacent to the girl Rita. The number of possible arrangement is :
(1) 4
(2) 5
(3) 10
(4) 8

29. How many words can be formed by taking 4 letters at a time out of the letters of the word "MATHEMATICS" ?
(1) 1680
(2) 2625
(3) 2454
(4) 1698

30. Let 'f' be a real valued function defined on a set $D \subseteq R$ and given by

$f(x) = \frac{1}{\log_{10}(1-x)} + \sqrt{x+2}$. Then the set D is :

(1) [-2, 1]
(2) $[-2, 0) \cup (0, 1)$
(3) $x \geq 2$
(4) $\{x : x \in R\}$

31. The value of $\int_0^{\frac{\pi}{2}} \sin 2x \log \tan x dx$, is

(1) 0
(2) -1
(3) 2π
(4) 1

32. If $f(2) = 4$, and $f'(2) = 1$, then value of $\lim_{x \to 2} \frac{xf(2) - 2f(x)}{x - 2}$ is :

(1) 1 (2) 4

(3) 2 (4) 0

33. If the sum of n terms of an A.P. is $3n^2 + 5n$ then which of its term is 164 ?

(1) 30^{th} (2) 28^{th}

(3) 27^{th} (4) 26^{th}

34. In S_n denotes the sum of first n terms of the series $S_n = 3 + 7 + 13 + 21 + 31 +$ ..... to n terms, then the value of S_n is :

(1) $\frac{n^2}{3}(3n+5)$ (2) $\frac{n}{6}(n^2+n+3)$

(3) $\frac{n}{2}(n^2+n+5)$ (4) $\frac{n}{3}(n^2+3n+5)$

35. If w is a non-real cube root of unity and n is not a multiple of 3, then $\begin{vmatrix} 1 & \omega^n & \omega^{2n} \\ \omega^{2n} & 1 & \omega^n \\ \omega^n & \omega^{2n} & 1 \end{vmatrix}$ is equal to :

(1) 2n (2) 1

(3) n^2 (4) 0

36. The point on the curve $9y^2 = x^3$, where normal to the curve makes equal intercepts with the axes is :

(1) $\left(1, \pm\frac{1}{3}\right)$

(2) $\left(4, \frac{8}{3}\right)$

(3) $\left(2, \pm\frac{2\sqrt{2}}{3}\right)$

(4) $\left(2, \sqrt{\frac{8}{3}}\right)$

37. If the coefficients of three consecutive terms in the expansion of $(1 + x)^n$ are in the ratio 1 : 7 : 42, then the value of 'n' is :

(1) 30
(2) 55
(3) 52
(4) 50

38. If the third term in the expansion of $\left(\frac{1}{x} + x^{\log_{10} x}\right)^5$ is 1000, then the value of x is

(1) 21
(2) 100
(3) 10
(4) 50

39. If a matrix A is both symmetric and skew-symmetric, then :

(1) A is a scalar matrix
(2) A is a zero matrix
(3) A is a diagonal matrix
(4) A is a square matrix

40. If B is a matrix, such that $B\begin{bmatrix}1 & -2\\ 1 & 4\end{bmatrix}=\begin{bmatrix}6 & 0\\ 0 & 6\end{bmatrix}$, then value of B is :

(1) $\begin{bmatrix}4 & 3\\ 2 & 1\end{bmatrix}$

(2) $\begin{bmatrix}4 & -2\\ -1 & 1\end{bmatrix}$

(3) $\begin{bmatrix} 4 & 2 \\ -1 & 1 \end{bmatrix}$ (4) $\begin{bmatrix} 4 & -3 \\ 1 & -1 \end{bmatrix}$

41. Probability of solving a problem of A, B, C are 1/3, 2/7 and 3/8 respectively. If all the three to solve the problem simultaneously, find the probability that exactly one of them can solve it

(1) $\frac{35}{168}$ (2) $\frac{1}{2}$

(3) $\frac{25}{56}$ (4) $\frac{101}{168}$

42. If $(a + b)^2x^2 + 8(a^2 - b^2)x + 16(a - b)^2 = 0$, then the value of x is :

(1) $\frac{a+b}{a-b}$ (2) $\frac{(b-a)}{a+b}$

(3) $\frac{4(b-a)}{a+b}$ (4) $\frac{4(a-b)}{a+b}$

43. The axes of an ellipse are along the coordinate axes, vertices are at $(0, \pm 10)$ and eccentricity $e = 4/5$. The equation of the ellipse is :

(1) $\frac{x^2}{164} + \frac{y^2}{36} = 1$

(2) $\frac{x^2}{36} + \frac{y^2}{164} = 1$

(3) $\frac{x^2}{64}+\frac{y^2}{100}=1$

(4) $\frac{x^2}{36}+\frac{y^2}{100}=1$

44. The area bounded by the curve $y^2 = 4x$ and $x^2 = 4y$ is :

(1) $\frac{14}{3}$ sq. units

(2) $\frac{16}{3}$ sq. units

(3) $\frac{3}{14}$ sq. units

(4) $\frac{8}{3}$ sq. units

45. A bag contains 4 red and 4 blue balls. Four balls are drawn one-by-one from the bag, then the probability that the drawn are in alternate colour, is

(1) $\frac{6}{35}$ (2) $\frac{7}{31}$

(3) $\frac{9}{31}$ (4) $\frac{1}{35}$

46. The number of terms in the expansion of $(1 - 3x + 3x^2 - x^3)^8$ is

(1) 32 (2) 24

(3) 26 (4) 25

47. If ${}^{n}C_{15} = {}^{n}C_{8}$, then value of ${}^{n}C_{21}$ is :

(1) 251 (2) 554

(3) 250 (4) 253

48. The sum of the series $\frac{1}{\log_2 4}+\frac{1}{\log_4 4}+\frac{1}{\log_8 4}+\frac{1}{\log_{16} 4}+.....+\frac{1}{\log_{2^n} 4}$ is :

(1) $n.\log_2 4$

(2) $\frac{n(n+1)}{4}$

(3) $\frac{n(n+1)(2n+1)}{12}$

(4) $\left[\frac{n(n+1)}{2}\right]^2$

49. An arc is in the form of a parabola with its axis vertical and one of its end is at the vertex. The arc is 10m high and 5m wide at the base. How wide is it 2m from the vertex of parabola ?

(1) $\frac{\sqrt{5}}{2}$m

(2) $\sqrt{5}$ m

(3) 2.5 m

(4) $\sqrt{\frac{5}{2}}$m

50. If a complex number z is given by $z = \frac{1+7i}{(2-i)^2}$, then

(1) $\arg(z) = \frac{5\pi}{4}$ (2) $\arg(z) = \frac{3\pi}{4}$

(3) $\arg(z) = \frac{\pi}{4}$ (4) $\arg(z) = -\frac{\pi}{4}$

51. The equation of the circle passing through (1, 0) and (0, 1) and having the smallest possible radius is :

(1) $x^2 + y^2 + x + y + 1 = 0$ (2) $x^2 + y^2 + x - y + 1 = 0$

(3) $x^2 + y^2 + x + y = 0$ (4) $x^2 + y^2 - x - y = 0$

52. Solution of the inequation given below is :

$\left|\frac{2}{x-4}\right| > 1, x \neq 4$

(1) (2, 6) (2) [2, 4)

(3) $(2, 4) \cup (4, 6)$ (4) [2, 6]

53. The number of terms with integral coefficients in the expansion of $(17^{1/3} + 35^{1/2})^{600}$ is

(1) 200 (2) 301

(3) 100 (4) 101

54. Value of x in the inequation $|x-1|+|x-2| \geq 4$, is

(1) $\left[-\frac{1}{2}, \frac{7}{2}\right]$

(2) $\left(-\infty, +\frac{1}{2}\right] \cup \left[\frac{7}{2}, \infty\right]$

(3) $\left(-\infty, -\frac{1}{2}\right] \cup \left[\frac{7}{2}, \infty\right)$

(4) $\left(-\infty, -\frac{1}{2}\right)$

55. Out of 9 outstanding students in a college, there are 4 boys and 5 girls. A team of 4 students is to be selected for a quiz programme. Find the probability that two are boys and two are girls ?

(1) $\frac{11}{21}$ (2) $\frac{10}{21}$

(3) $\frac{20}{41}$ (4) $\frac{2}{63}$

56. The sum all the natural numbers that can be formed with the digits 2, 3, 4, 5 taken all at a time is :

(1) 93324 (2) 90002

(3) 93240 (4) 93004

57. If $z = 2 - 3i$, then value of $4z^3 - 3z^2 + 169$ is :

(1) 160 (2) 140

(3) 0 (4) 199

58. The quadratic equation $x^2(a^2 + b^2) + 2x(ac + bd) + (c^2 + d^2) = 0$ has no real roots, if

(1) $ab = cd$ (2) $ad \neq bc$

(3) $ab \neq cd$ (4) $ad = bc$

59. It is given that $x = 1$, the function $f(x) = x^4 - 62x^2 + ax + 9$ attains its maximum value on the interval $[0, 2]$, the value of 'a' is

(1) 100 (2) 119

(3) 120 (4) 140

60. If $f : R \to R$ be a function defined by $f(x) = \frac{x^2}{1+x^2}$, then the range of the function 'f' is :

(1) $[0, \infty)$ (2) R

(3) R/{1} (4) [0, 1)

61. If a line perpendicular to the line segment joining the point (1, 0) and (2, 3) divided in ratio 1 : n, then equation of the line is :

(1) $(n + 1)x + 3(n + 1)y = n + 11$

(2) $(n + 1)x + 3(n + 2)y = n + 10$

(3) $(n + 1)x - (n - 2)y = n + 11$

(4) $nx + (n + 1)y = n + 11$

62. A box contains 5 different red balls and 6 different white balls. In how many ways can 6 balls be selected so that there are at least two balls each colour

(1) 625 (2) 425

(3) 400 (4) 252

63. The radius of the circle $25x^2 + 25y^2 - 20x + 2y - 60 = 0$

(1) $\frac{16}{25}$ (2) $\frac{\sqrt{1601}}{25}$

(3) $\frac{8}{5}$ (4) $\frac{\sqrt{464}}{5}$

64. In a Geometric Progression (G.P.), if the (m + n)th term is 'p' and (m – n)th term of 'q' then its mth term is :

(1) p + q (2) $\frac{1}{2}(p + q)$

(3) pq (4) $\sqrt{pq}$

65. The letters of the word 'RANDOM' are written in all possible orders and these words are written in dictionary. The rank of word 'RANDOM' is :

(1) 614 (2) 600

(3) 610 (4) 612

66. The value of $\int e^{2x}\left(\frac{1+\sin 2x}{1+\cos 2x}\right)dx$ is (C being constant of integration) :

(1) $e^{2x}\sec^2 x + C$

(2) $\frac{1}{2}e^{2x}\tan x + C$

(3) $e^{2x}\tan x + C$

(4) $\frac{1}{2}e^{2x}\sec^2 x + C$

67. The value of $\int \sin^{-1}(\cos x)dx$, $0 < x < 11/2$, is (C being constant of integration)

(1) $\frac{\pi}{2} - x + C$

(2) $\frac{\pi}{2}x - \frac{x^2}{2} + C$

(3) $\frac{\pi}{2}x + \frac{x^2}{2} + C$

(4) $-\frac{\sin x}{\sqrt{1-x^2}} + C$

68. If a arithmetic means are inserted between 20 and 60 such that the ratio of the first mean to the least mean is 1 : 3, then the value of 'n' is :

(1) 15
(2) 10
(3) 11
(4) 12

69. If $f(x) = \log\left(\frac{1+x}{1-x}\right)$, then $f\left(\frac{2x}{1+x^2}\right)$ is equal to

(1) $3f(x)$
(2) $[f(x)]^3$
(3) $2f(x)$
(4) $[f(x)]^{12}$

70. In how many ways 5 boys and 3 girls can be seated in a row so that no two girls are together ?

(1) 2400
(2) 7200
(3) 14400
(4) 1440

71. A particle moves along a curve, $6y = x^3 + 2$ such that at some instant the y-coordinate is changing 8 times as fast as the x-coordinate. The position of the particle at that instant is :

(1) (4, 11)
(2) (4, 6)
(3) (1, 4)
(4) (2, 11)

72. If $y = \log_x 2$, then $\frac{dy}{dx}$ is equal to

(1) $-\frac{1}{(\log_2 x)}.\frac{1}{(x.\log_e 2)}$

(2) $-\frac{1}{(\log_2 x)^2}.\frac{1}{(x.\log_e 2)}$

(3) $(\log_x 2)\ .\ \log_e 2$

(4) $2\log_x 2.\left(\frac{\log_e 2}{x}\right)$

73. Set of solutions of the equation $z^2 + |z| = 0$, where z is a complex number ($z = x + iy$), is :

(1) {0, 1, 2i}

(2) {0, i, 1}

(3) {0, 1}

(4) {0, i, -i}

74. For a post three persons A, B and C appear in the interview. The probability of A being selected is twice that of B and the probability of B being selected is thrice that of C. The probability of A being selected is :

(1) $\frac{1}{10}$ (2) $\frac{3}{5}$

(3) $\frac{3}{10}$ (4) $\frac{2}{5}$

75. If $R = \{(x, y) : x, y, \in Z, x^2 + y^2 \leq 4\}$ is a relation defined on the set Z of integers, then the domain of R is :

(1) {0, 1, 2}
(2) (-2, -1, 0, 1, 2}
(3) {0, 1, 2, 3, 4}
(4) {0,1 , 2}

76. In a flight of 600 km an aircraft was slowed down due to bad weather. Its average speed for the trip was reduced by 200 km/hr and the time increased by 30 minutes. Duration of the flights is :

(1) 1 hour
(2) 2 hours
(3) 1 hour 20 minutes
(4) 30 minutes

77. Find the value of x, if

$$\begin{vmatrix} x-2 & 2x-3 & 3x-4 \\ x-4 & 2x-9 & 3x-16 \\ x-8 & 2x-27 & 3x-64 \end{vmatrix} = 0$$

(1) 5
(2) 3
(3) 2
(4) 4

78. If $S = 1 + \frac{1+2}{2} + \frac{1+2+3}{3} + \frac{1+2+3+4}{4} + ...n$ terms then the value of 'S' is :

(1) $\frac{n(n+1)(2n+1)}{12}$

(2) $\frac{n^2}{2}$

(3) $\frac{n(n+2)}{4}$

(4) $\frac{n(n+3)}{4}$

79. If $x = 1 + a + a^2 + a^3 + \ldots\ldots \infty\ |a| < 1$
and $y = 1 + b + b^2 + b^3 + \ldots\ldots, \infty\ |b| < 1$
then value of $1 + ab + a^2b^2 + a^3b^3 + \ldots\ldots\infty$, is :

(1) $\frac{1+xy}{x+y+1}$

(2) $1 + xy$

(3) xy

(4) $\frac{xy}{x+y-1}$

80. The length of the latus-rectum of the parabola $x^2 - 4x - 8y + 12 = 0$ is :

(1) 2

(2) 8

(3) 4

(4) 10

Direction For Q. 81 to 85 : In each of the following questions one number-series is given in which one term is wrong. Find out the wrong term.

81. 4, 11, 21, 34, 39, 69, 91
    (1) 49
    (2) 34
    (3) 69
    (4) 21

82. 8, 36, 149, 596, 2388, 9556
    (1) 2388
    (2) 9556
    (3) 149
    (4) 596

83. 5, 7, 11, 20, 35, 67
    (1) 35
    (2) 11
    (3) 20
    (4) 67

84. 5, 12, 19, 33, 47, 75, 104
    (1) 47
    (2) 75
    (3) 33
    (4) 104

85. 0, 3, 8, 15, 24, 36, 48
    (1) 15
    (2) 48
    (3) 36
    (4) 24

86. In a the following question one word is different from the rest. Find out the word which does not belong to the group.
    (1) sun
    (2) star

(3) Moon

(4) Sky

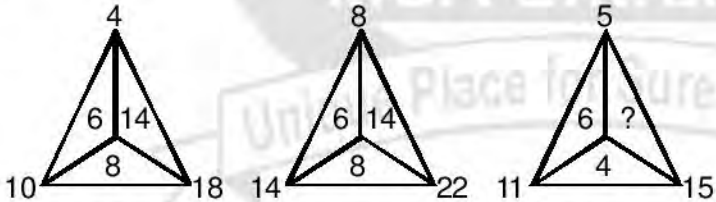
Direction (Q. 87 – 96) : Which number should come in place of question mark (?) in the following

87.

1	7	9
2	14	?
3	105	117

(1) 16
(2) 26
(3) 20
(4) 12

88.



Direction (Q. 87 – 96) : Which number should come in place of question mark (?) in the following

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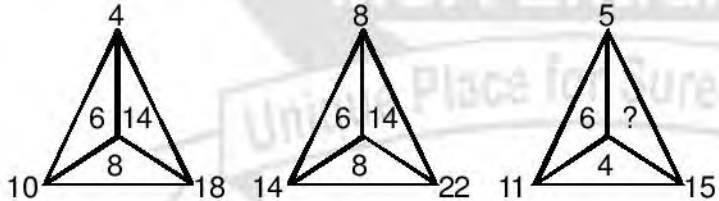
2	14	?
3	105	117

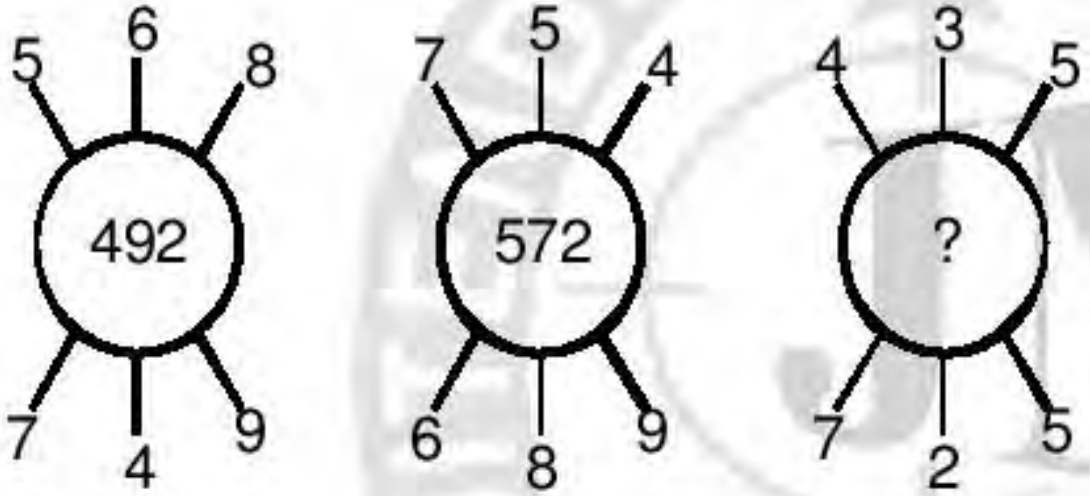
(1) 16
(2) 26
(3) 20
(4) 12

88.



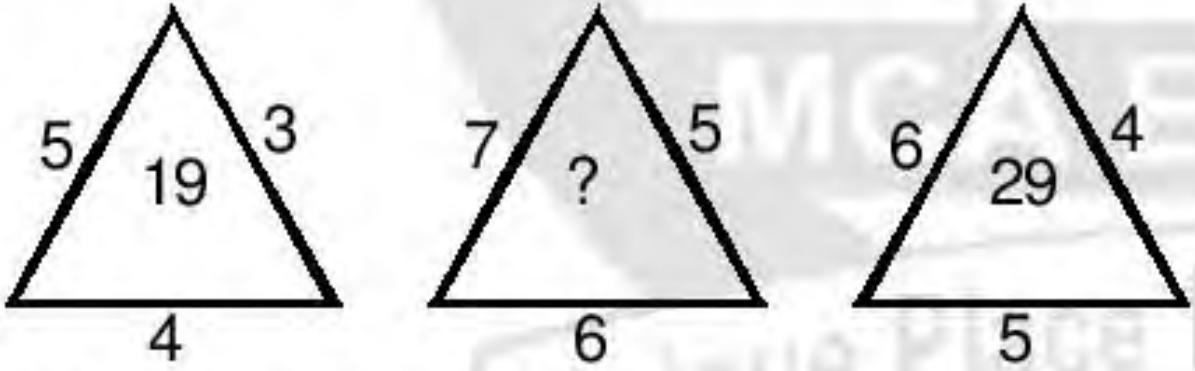
(1) 14
(2) 10
(3) 8
(4) 6

89.



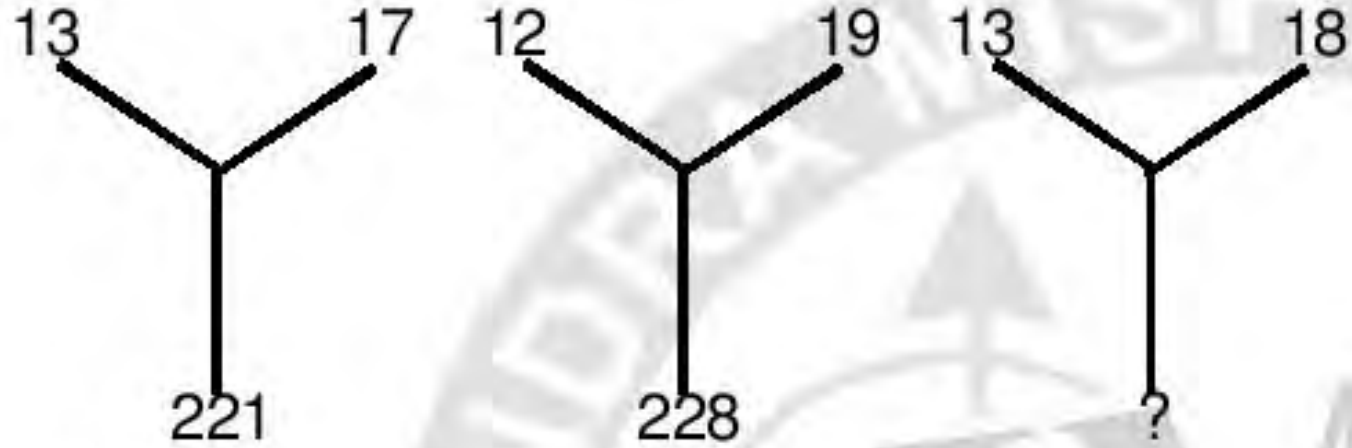
(1) 130
(2) 115
(3) 140
(4) 135

90.



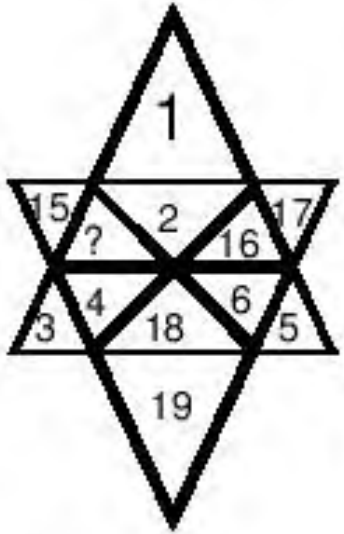
(1) 37
(2) 41
(3) 25
(4) 47

91.

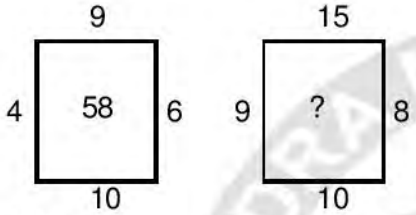


(1) 234
(2) 31
(3) 312
(4) 229

92.



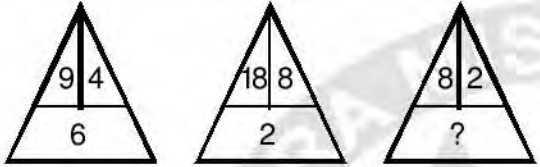
(1) 20
(2) 13
(3) 21
(4) 14



(1) 63
(2) 117
(3) 78
(4) 100

94.

(1) 21
(2) 16
(3) 10
(4) 8



(1) 7
(2) 6
(3) 5
(4) 4

96.

(1) 13
(2) -30
(3) 8
(4) 30

97. If the following words are arranged in the dictionary order then which will be the last word ?

(1) Dream
(2) Drench
(3) Dread
(4) Dredge

Ravi and kunal are good in Hockey and Volleyball, Sachin and Ravi are good in Hockey and base ball. Gaurav and kunal are good in Cricket and Volleball. Sachin, Gaurav and Michael are good is Football and Baseball.

98. Who is good in Hockey, Cricket and Volleyball ?
    (1) Gaurav
    (2) Sachin
    (3) Kunal
    (4) Ravi

99. Who is good in Baseball, Cricket, Volleball and Football ?
    (1) Ravi
    (2) Sachin
    (3) Gaurav
    (4) Kunal

100.Who is good in Baseball, Volleball and Hoceky ?

(1) Sachin (2) kunal

(3) Gaurav (4) Ravi

101.Who is good in Hockey, Baseball and Football ?

(1) Ravi (2) Kunal

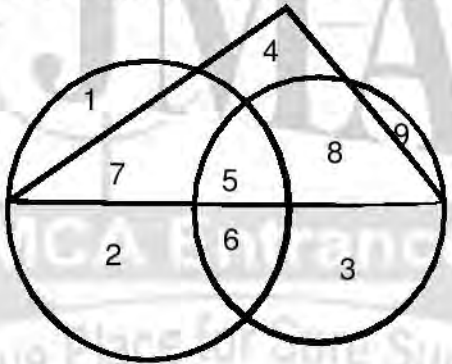
(3) Gaurav (4) Sachin

102.As a "Shirt is related to "Cloth" in the same way "Chair" is realted to what ?

(1) Weaving
(2) Repairing
(3) Wood
(4) Sit

103.As 'Author' is related to 'Writing', similarly. "Theif is related to what ?
(1) To steal
(2) To night
(3) To feel
(4) To wonder

Direction (Q. 104 – 108) : These question are based on the following diagram in which the triangle represents female graduates, Small circle represents self employed females having a car and the big circle represents self-employed females with bank load facility. Number are shown in the different sections of the diagram. On the basis of these numbers answer the following questions :



104.How many non-graduate self employed felames are with bank loan facility ?

(1) 9 (2) 8

(3) 3 (4) 12

105.How many female graduates are not self – employed ?

(1) 15 (2) 10

(3) 12 (4) 4

106.How many female graduates are self-employed and having a car ?

(1) 15 (2) 12

(3) 20 (4) 13

107.How many non-graduate females are self-employed ?

(1) 12 (2) 11

(3) 9 (4) 21

108.How many self-employed female graduates are with bank loan facility ?

(1) 12 (2) 20

(3) 7 (4) 5

Direction (Q. 109 – 112) : In each of the following questions, statement/group of statements is given followed by some conclusions, choose the conclusion which logically follows from the given statements.

109. **Statements :**

a. Processed meat is a perishable food.

b. All perishable foods are packed in sealed tins.

c. Sealed tins some times do not contain processed meat.

Conclusions :

(1) Processed meat is always packed in sealed tins.

(2) Processed meat is sometimes not packed in sealed tins.

(3) Non – perishable foods are never packed in sealed tins.

(4) Sealed tins always contain perishable food.

110. **Statements :**

1. Only students can participate in the race.
2. Some participants in the race are females.
3. All females participants in the race are invited for coaching.

Conclusion :

(1) All participants in the race are invited for coashing.
(2) All participants in the race are males.
(3) All participants in the race are students.
(4) All students are invited for coaching.

111. **Statements :**

1. I watch T.V. only If I am bored.
2. I am never bored when I have my brother's company.
3. Whenever I go to the theatre I take my brother along.

Conclusions :

(1) If I am bored, I seek my brother's company.

(2) If I am bored, I watch T.B.

(3) If I am not with my brother then I watch T.V.

(4) If I am not bored, I do not watch T.V.

112. **Statements :**

1. All members of Mohan's family are honest.
2. Some members of Mohan's family are not employed.
3. Some employed persons are not honest.
4. Some honest persons are not employed

Conclusions :

(1) The employed members of Mohan's family are not honest.
(2) All members of Mohan's family are employed.
(3) The employed members of Mohan's family are honest
(4) The honest members of Mohan's family are not employed

113.Letters of which of the alternative answers when placed at the blank places one after another will complete the given letter – series ?

a __ b b c __ a a b __ c c a __ b b c c

(1) c a b a
(2) a c b a
(3) a b b a
(4) b a c b

114. As "Earthquake' is related to "Earth', similary, 'Thundering' is related to what

(1) Fair
(2) Sea
(3) Earth
(4) Sky

Direction (Q. 115 – 117) : In each of the following problems, there is one questions and three statements I, II and III given below the question. You have to decide whether the data given in the statements is sufficient to answer the question. Read all the question. Any one such alternative which contains the statements I and II together should not be accepted as answer to the questions. Remember out of the three statements, each of them alone can also be sufficient to answer the question. In such cases for example, your answer should be taken as Only I or Only II or Only III and not only I.

115.What does 'comes' represent in a code language ?

I. 'pit na tac' means 'come and go' in that code language.

II. 'ja ta da' means 'you are good' in that code language.
III. 'na da rac' means 'You can come' in that code language.
(1) I and II together
(2) I and III together
(3) I, II and III all together
(4) II and III together

116. Five persons – A, B, C, D and E are sitting in a row. Who is sitting in the middle ?
I. B is between E and C
II. B is to the right of E
III. D is between A and E.
(1) I and III together
(2) I , II and III together
(3) II and III together
(4) I and II together

117. Pankaj is younger than Sunita and Rupali is older than Tom. Who among them is the oldest ?

I. Rupali is older than Pankaj.

II. Sunita is older than Ruapli.

III. Tom is youngest among all.

(1) Only II

(2) I & II together

(3) Only III

(4) I, II and III together

118. If in a class of 37 students the places of Anuradha and Saroj are 10^{th} and 16^{th} respectively, what are their places from the last ?

(1) 22th and 21^{st}
(2) 28^{th} and 22^{nd}
(3) 28^{th} and 20^{th}
(4) 27^{th} and 22^{nd}

119. In the following series, find the term in place of question – mark (?)

3, 8, 27, 112, 565, ?

(1) 1596
(2) 3400
(3) 2266
(4) 3396

120. **Statement :** "Some kings are not beggars." If this fact is false then which of the following conclusion is false :

Conclusion :

I. All kings are beggars.
II. Some beggars are king.
III. Some kings are beggars.
IV. All beggars are king.
V No. king is beggars.

(1) Only II and III
(2) All
(3) Only I and IV
(4) Only V