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Number system

1. If $\frac{3+\sqrt{7}}{3-\sqrt{7}} = a + b\sqrt{7}$ then (a, b) =
(1) (8, −3) (2) (−8, −3)
(3) (−8, 3) (4) (8, 3)

2. $\frac{\sqrt{5}-2}{\sqrt{5}+2} - \frac{\sqrt{5}+2}{\sqrt{5}-2} =$
(1) $8\sqrt{5}$ (2) $-8\sqrt{5}$
(3) $6\sqrt{5}$ (4) $-6\sqrt{5}$

3. If $x = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ and $y = 1$, the value of $\frac{x-y}{x-3y}$ is
(1) $\frac{5}{\sqrt{5}-4}$ (2) $\frac{5}{\sqrt{6}+4}$
(3) $\frac{\sqrt{6}-4}{5}$ (4) $\frac{\sqrt{6}+4}{5}$

4. Which one is greatest in the following?
(1) $\sqrt{2}$ (2) $\sqrt[3]{3}$
(3) $\sqrt[3]{4}$ (4) $\sqrt[3]{2}$

5. Which one is the smallest in the following?
(1) $\sqrt{2}$ (2) $\sqrt[3]{3}$
(3) $\sqrt[3]{4}$ (4) $\sqrt[3]{2}$

6. The value of $\sqrt[5]{(32)^{-3}}$ is
(1) 2^{-3} (2) 2^3
(3) 2^5 (4) 2^{-4}

7. If $x = \frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}}$ and $y = \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ the value of $x^2 + xy + y^2$ is
(1) 0 (2) 100
(3) 1 (4) 99

8. $\frac{2}{\sqrt{5}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{2}} - \frac{3}{\sqrt{5}+\sqrt{2}} =$
(1) 1 (2) 0
(3) 10 (4) 100

9. Which of the following is the smallest?
(1) $\sqrt[4]{5}$ (2) $\sqrt[5]{4}$
(3) $\sqrt{4}$ (4) $\sqrt[10]{2}$

10 The product of $\sqrt{3}$ and $\sqrt[3]{5}$ is
(1) $\sqrt[6]{375}$ (2) $\sqrt[6]{675}$
(3) $\sqrt[6]{575}$ (4) $\sqrt[6]{475}$

11. The exponential form of $\sqrt{\sqrt{2}\times\sqrt{2}\times\sqrt{2}}$ is
(1) $2^{1/16}$ (2) $8^{3/4}$
(3) $2^{3/4}$ (4) $8^{1/2}$

12. The exponential form of $\sqrt{\underbrace{\sqrt{2}+\sqrt{2}+\sqrt{2}+.....+\sqrt{2}}_{8 \text{ times}}}$ is
(1) $2^{7/4}$ (2) $8^{7/4}$
(3) $2^{3/4}$ (4) $8^{1/2}$

13. If $2^{5x} \div 2^x = \sqrt[5]{2^{20}}$, then x =
(1) 0 (2) −1
(3) $\frac{1}{2}$ (4) 1

14. $\sqrt[3]{(729)^{2.5}} =$
(1) $\frac{1}{81}$ (2) 81
(3) 243 (4) 729

15. $\sqrt[4]{\sqrt[3]{x^2}} =$
(1) x (2) $x^{1/2}$
(3) $x^{1/3}$ (4) $x^{1/6}$

16. If $3\sqrt[3]{(729)^{2.5}} = \sqrt[4]{\sqrt[3]{x^2}}$, then x =
(1) 3^6 (2) 3^{36}
(3) 3^9 (4) 3^{27}

17. If $x = 3 + \sqrt{8}$ and $y = 3 - \sqrt{8}$ then $\frac{1}{x^2} + \frac{1}{y^2} =$
(1) −34 (2) 34
(3) $12\sqrt{8}$ (4) $-12\sqrt{8}$

18. If $x = 3 + \sqrt{8}$ and $y = 3 - \sqrt{8}$ then $x^{-4} + y^{-4} =$
(1) 1156 (2) −1156
(3) 1154 (4) 1296

19. $0.\overline{37}$ is equivalent to
(1) $\frac{37}{198}$ (2) $\frac{55}{67}$
(3) $\frac{37}{99}$ (4) $\frac{37}{90}$

20. The sum of a rational number and an irrational number
(1) is irrational (2) is rational
(3) may be rational (4) may be irrational

21. The product of two irrational numbers
(1) is irrational
(2) need not be irrational
(3) is rational
(4) none of these

22. Which of the following statements is false?
(1) a rational number may have a terminating decimal representation
(2) difference of two irrational numbers need not be irrational
(3) every real number is either rational or irrational
(4) irrational numbers cannot be represented by points on the number line

23. $\sqrt[4]{81} - 8\sqrt[3]{216} + 15\sqrt[5]{32} + \sqrt{225}$ is equal to
(1) 10 (2) 0
(3) 1 (4) 5

24. $\sqrt{8}\sqrt[3]{4} + \sqrt[3]{625}\sqrt[4]{125} =$
(1) $5\sqrt{2} + 3\sqrt{5}$ (2) $\sqrt{2} + \sqrt{125}$
(3) 1 (4) none of these

25. The least factor by which the number 10584 must be multiplied so that the product may be a cube number is
(1) 11 (2) 4
(3) 2 (4) 7

26. The value of x which satisfies $|3x - 2| = 13$ is
(1) $-\frac{11}{3}$ (2) $\frac{11}{3}$
(3) -5 (4) 2

27. If $x = \frac{5}{\sqrt{5} + \sqrt{4}}; y = \frac{6}{\sqrt{5} - \sqrt{4}}$, then $x + y =$
(1) $11\sqrt{5} - \sqrt{4}$ (2) $11\sqrt{5} + \sqrt{4}$
(3) $\sqrt{5} + \sqrt{4}$ (4) $\sqrt{5} + 11\sqrt{4}$

28. $\left[\left(\sqrt[n]{x^2}\right)^{n/2}\right]^2 =$
(1) x (2) $x^{n/2}$
(3) x^2 (4) $\frac{1}{x^2}$

29. Irrational numbers can be
(1) natural numbers (2) integers
(3) real numbers (4) whole number

30. If $\sqrt{xy}$ is irrational, then $\sqrt{x} + \sqrt{y}$ will be
(1) a natural number (2) an integer
(3) rational (4) real

31. If P is an integer and P^2 is divisible by 3, then P is divisible by 3. This statement is
(1) always true
(2) never true
(3) true when P is positive
(4) true when P is negative

32. If A is rational and B is irrational, then AB is
(1) rational (2) irrational
(3) an integer (4) real

33. How many integers lie between – 100 and 100?
(1) 200 (2) 199
(3) 198 (4) 197

34. Between any 2 integers, there are k integers. Then k is
(1) finite
(2) infinite
(3) finite under some conditions
(4) infinite under some conditions

35. If $x = 3^{1/3} + 3^{-1/3}$, the value of $x^3 - 3x$ is
(1) 0 (2) 1
(3) $-\frac{9}{2}$ (4) $\frac{10}{3}$

36. The smallest number which must be added to 803642 in order to obtain a multiple of 9 is
(1) 3 (2) 4
(3) 5 (4) 6

37. Find the total number of prime numbers lying between 120 and 140.
(1) 3 (2) 4
(3) 5 (4) 6

38. The rational number which does not lie between rational numbers $\frac{3}{5}$ and $\frac{2}{3}$ is
(1) $\frac{46}{75}$ (2) $\frac{47}{75}$
(3) $\frac{49}{75}$ (4) $\frac{52}{75}$

39. The sum of all values of x satisfying $x + 3|x| = 10$ is
(1) $\frac{5}{2}$ (2) $-\frac{5}{2}$
(3) $\frac{15}{2}$ (4) $-\frac{15}{2}$

40. The product of any 3 consecutive positive integers is always divisible by
(1) 6 (2) 7
(3) 8 (4) 9

41. The product of any 4 consecutive positive integers is always divisible by
(1) 7 (2) 10
(3) 15 (4) 24

42. $\frac{1}{1+x^{a-b}}+\frac{1}{1+x^{b-a}}=$

(1) $x^{2(a-b)}$ (2) 1

(3) x^{a-b} (4) x^{b-a}

43. If $2^x=3^y=6^{-z}$, then $\frac{1}{x}+\frac{1}{y}+\frac{1}{z}=$

(1) 2 (2) 3

(3) 1 (4) 0

44. If $25^{x-1}=5^{2x-1}-100$, then x is

(1) 0 (2) 1

(3) 2 (4) 3

45. If the number 12k453 is divisible by 9, then the digit at the place of k is

(1) 1 (2) 2

(3) 3 (4) 4

46. If $\frac{100\sqrt{25}}{\sqrt{25}+x}=50$, then $x=$

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

(3) $\sqrt{25}$ (4) $\frac{1}{25}$

47. $\left(\frac{x^b}{x^c}\right)^{\frac{1}{bc}}\left(\frac{x^c}{x^a}\right)^{\frac{1}{ca}}\left(\frac{x^a}{x^b}\right)^{\frac{1}{ab}}=$

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

(3) 1 (4) -1

48. $2.\overline{357}=$

(1) $\frac{2355}{1001}$ (2) $\frac{2370}{997}$

(3) $\frac{2355}{999}$ (4) $\frac{2355}{990}$

49. The least number which when divided by 12, 16 and 18 leaves the remainder 5 in each case is

(1) 149 (2) 150

(3) 156 (4) 298

50. The smallest number which must be added to 703673 in order to obtain a multiple of 9 is

(1) 1 (2) 2

(3) 3 (4) 4

51. The smallest number which must be subtracted from 834213 to obtain a multiple of 9 is

(1) 3 (2) 6

(3) 9 (4) 1

52. The least factor by which the number 4563 must be multiplied so that the product may be a perfect square is

(1) 27 (2) 3

(3) 13 (4) 4

53. The least factor by which the number 46800 must be divided so that the quotient may be a perfect square is

(1) 2 (2) 13

(3) 9 (4) 5

54. The square root of the number $4\frac{53}{169}$ is.

(1) $2\frac{1}{13}$ (2) $2\frac{7}{13}$

(3) $2\frac{11}{13}$ (4) $2\frac{13}{17}$

55. $\frac{(0.05)^2+(0.019)^2}{(0.005)^2+(0.0019)^2}=$

(1) 19 (2) 100

(3) 380 (4) 190

56. The least factor by which the number 3375 must be divided so that the product may be a perfect cube

(1) 2 (2) 5

(3) 11 (4) 4

57. A three-digit prime number is such that the digit in the units place is equal to the sum of the other two, and if the other digits are interchanged, we still have a prime number of three digits. Then the total number of such primes is.

(1) 2 (2) 4

(3) 6 (4) 7

58. The least numbers by which 539 should be divided to make it a perfect square is

(1 3 (2) 7

(3) 11 (4) 1

59. The least squared numbers divisible by 4, 5 and 6 is

(1) 3600 (2) 900

(3) 1200 (4) 200

60. The LCM of 30 m^3n^2, 25 mn^3, 10 m^4 is

(1) $750m^3n^2$ (2) 150 m^4n^3

(3) 5 mn^2 (4) 6 m^2n

61. The value of x satisfying the equation $(2x+3)^2-(2x-3)^2=0$ is

(1) 0 (2) 2

(3) -2 (4) 3

62. The solution of the equation $\frac{3x+1}{4}-\frac{2x-3}{7}=\frac{3x+4}{14}$ is

(1) $-5\frac{3}{7}$ (2) $6\frac{3}{10}$

(3) $-4\frac{1}{14}$ (4) $-1\frac{4}{7}$

63. The HCF of $40a^5 b^3 c^7$, $15b^2 c^3$, $5c^4 a^2 b$ is

(1) $15bc^3$ (2) $40a^5b^3c^{11}$

(3) $120a^5b^3c^7$ (4) $5c^3$

64. Given $s^2 + c^2 = 1$ and $\frac{s}{c} = t$, then $(1 + t^2)$ is equal to

(1) s^2 (2) c^{-2}

(3) c^2 (4) t

65. How many prime number are there between 0 and 30

(1) 9 (2) 10

(3) 8 (4) 11

66. Two irrational numbers between 2 and 2.5 are

(1) $\sqrt{5}$ and $\sqrt{2\times\sqrt{5}}$ (2) $\sqrt{5}$ and $\sqrt{2\times 5}$

(3) $\sqrt{5}$ and $\sqrt{2\times\sqrt{7}}$ (4) None of these

67. The exponential form of $\sqrt{\sqrt{2}\sqrt{3}}$ is

(1) $6^{1/2}$ (2) $6^{1/3}$

(3) $6^{1/4}$ (4) 6

68. The rational form of -25.6875 is

(1) $-\frac{411}{16}$ (2) $-\frac{421}{16}$

(3) $-\frac{431}{16}$ (4) $-\frac{441}{16}$

69. The rational form of $2.7\overline{435}$ is

(1) $\frac{27161}{999}$ (2) $\frac{27}{99}$

(3) $\frac{27161}{9900}$ (4) $\frac{27161}{9000}$

70. The value of $0.4\overline{23}$ is

(1) $\frac{423}{1000}$ (2) $\frac{479}{1000}$

(3) $\frac{423}{990}$ (4) $\frac{419}{990}$

71. Which of the following is not a rational number?

(1) $\sqrt{2}$ (2) $\sqrt{4}$

(3) $\sqrt{9}$ (4) $\sqrt{16}$

72. $1+\frac{1}{1+\frac{1}{1+1/3}} =$

(1) $\frac{1}{3}$ (2) $\frac{11}{7}$

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

73. The number $\frac{3-\sqrt{3}}{3+\sqrt{3}}$ is

(1) Rational (2) Irrational

(3) Both (4) Can't say

74. If $x-\frac{1}{x}=\sqrt{3}$, then $x^3-\frac{1}{x^3}=$

(1) $6\sqrt{3}$ (2) $3\sqrt{3}$

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

75. The value of $5.\overline{2}$

(1) $\frac{45}{9}$ (2) $\frac{46}{9}$

(3) $\frac{47}{9}$ (4) None

76. $\frac{(x^{a+b})^2(x^{b+c})(x^{c+a})}{(x^a x^b x^c)^4} =$

(1) -1 (2) 0

(3) 1 (4) None

77. $\frac{(0.6)^0-(0.1)^{-1}}{(3/2^3)^{-1}(3/2)^3+\left(-\frac{1}{3}\right)^{-1}} =$

(1) 3/2 (2) $-3/2$

(3) 2/3 (4) $-1/2$

78. If $2^x = 4^y = 8^z$ and $\frac{1}{2x}+\frac{1}{4y}+\frac{1}{4z} = 4$, then the value of x is

(1) $\frac{7}{16}$ (2) $\frac{7}{32}$

(3) $\frac{7}{48}$ (4) None of these

79. If $9^{x-1} = 3^{2x-1} - 486$, then x =

(1) 3.5 (2) 2.5

(3) 1.5 (4) 0

80. If $a = \frac{1}{3-2\sqrt{2}}$, $b = \frac{1}{3+2\sqrt{2}}$, then $a^2 + b^2 =$

(1) 34 (2) 35

(3) 36 (4) 37

81. $\frac{2^{n+4}-2(2^n)}{2(2^{n+3})}+2^{-3} =$

(1) 2^{n+1} (2) $-2^{n+1}+\frac{1}{8}$

(3) $\frac{9}{8}-2^n$ (4) 1

82. If $2^{2x-y} = 32$ and $2^{x+y} = 16$ then $x^2 + y^2 =$

(1) 9 (2) 10
(3) 11 (4) 13

83. $\dfrac{(25)^{5/2}(243)^{2/5}}{(16)^{3/4}(8)^{5/3}} =$

(1) $\dfrac{5625}{128}$ (2) $\dfrac{5615}{256}$

(3) $\dfrac{5625}{256}$ (4) $\dfrac{28125}{256}$

84. $\left[(b^{a-a^{-1}})^{\frac{1}{a-1}}\right]^{\frac{a}{a+1}} =$

(1) b (2) $\dfrac{1}{b}$

(3) b^a (4) $\dfrac{1}{b^a}$

85. $\sqrt[3]{24} + \sqrt[3]{81} - \sqrt[3]{192} =$

(1) $\sqrt[3]{3}$ (2) $\sqrt{3}$
(3) 3 (4) None of these

86. The value of $5\sqrt{3} - 3\sqrt{12} + 2\sqrt{75}$ on simplifying is

(1) $5\sqrt{3}$ (2) $6\sqrt{3}$
(3) $\sqrt{3}$ (4) $9\sqrt{3}$

87. If $\sqrt{3} = 1.732, \sqrt{5} = 2.236$, then the value of $\dfrac{6}{\sqrt{5}-\sqrt{3}}$ is

(1) 10.905 (2) 11.904
(3) 11.905 (4) 9.905

88. The product of $4\sqrt{6}$ and $3\sqrt{24}$ is

(1) 124 (2) 134
(3) 144 (4) 154

89. If $a = \dfrac{2+\sqrt{3}}{2-\sqrt{3}}$, $b = \dfrac{2-\sqrt{3}}{2+\sqrt{3}}$, then $a + b =$

(1) 14 (2) -14
(3) $8\sqrt{3}$ (4) $-\sqrt{3}$

90. If $x = \dfrac{1}{2-\sqrt{3}}$, then $x^3 - 2x^2 - 7x + 5 =$

(1) 2 (2) 1
(3) 0 (4) 3

Level-II

1. Arrange in ascending order $\sqrt[6]{7}, \sqrt[4]{3}, \sqrt[12]{48}, \sqrt[3]{2}$

(1) $\sqrt[3]{2}, \sqrt[4]{3}, \sqrt[12]{48}, \sqrt[6]{7}$ (2) $\sqrt[3]{2}, \sqrt[4]{3}, \sqrt[6]{7}, \sqrt[12]{48}$
(3) $\sqrt[4]{3}, \sqrt[3]{2}, \sqrt[6]{7}, \sqrt[12]{48}$ (4) $\sqrt[4]{3}, \sqrt[3]{2}, \sqrt[12]{48}, \sqrt[6]{7}$

2. Arrange in descending order $\sqrt{8}, \sqrt[3]{81}, \sqrt[3]{250}$

(1) $\sqrt[3]{81}, \sqrt{8}, \sqrt[3]{250}$ (2) $\sqrt{8}, \sqrt[3]{250}, \sqrt[3]{81}$
(3) $\sqrt[3]{81}, \sqrt[3]{250}, \sqrt{8}$ (4) $\sqrt[3]{250}, \sqrt[3]{81}, \sqrt{8}$

3. The value of x in $\sqrt[4]{5x+1} = 3$ is

(1) 16 (2) 5
(3) 3 (4) 4

4. $(0.04)^{-1.5} =$

(1) 25 (2) 125
(3) 625 (4) 81

5. Which one of the following is a rational number ?

(1) $(\sqrt[3]{2})^2$
(2) $2\sqrt{2}$
(3) $2 + \sqrt{2}$
(4) $(2+\sqrt{2})^2 + (2-\sqrt{2})^2$

6. The value of x in $\sqrt[3]{11x-7} - 5 = 0$ is

(1) 33 (2) 22
(3) 12 (4) 24

7. Which of the following is not an improper fraction

(1) $\dfrac{4}{3}$ (2) $\dfrac{3}{2}$

(3) $\dfrac{5}{3}$ (4) $\dfrac{7}{11}$

8. $\sqrt{2^{-1}3}\sqrt{3^{-1}6}\sqrt{6^{-1}2} =$

(1) 36 (2) 1
(3) 9 (4) 10

9. $\left(\dfrac{2019^a}{2019^b}\right)^{\frac{1}{ab}}\left(\dfrac{2019^b}{2019^c}\right)^{\frac{1}{bc}}\left(\dfrac{2019^c}{2019^a}\right)^{\frac{1}{ca}} =$

(1) 1 (2) 2019
(3) $(2019)^{abc}$ (4) $(2019)^{-abc}$

10. $\left(\dfrac{x^b}{x^c}\right)^{(b+c-a)}\left(\dfrac{x^c}{x^a}\right)^{(c+a-b)}\left(\dfrac{x^a}{x^b}\right)^{(a+b-c)} =$

(1) x^{abc} (2) x^{a+b+c}
(3) $x^{ab+bc+ca}$ (4) 1

11. If $y = 1.\overline{3}$, then $9y^2 - 3y =$

(1) 35 (2) 36
(3) 12 (4) 27

12. If $abc = 1$, then

$$\frac{1}{1+a+b^{-1}}+\frac{1}{1+b+c^{-1}}+\frac{1}{1+c+a^{-1}} =$$

(1) 1 (2) -1

(3) $a+b+c$ (4) $\frac{1}{a+b+c}$

13. $\frac{2^{7/2}.\sqrt{5^3}}{2^{5/2}.\sqrt{5}} =$

(1) 10 (2) 7
(3) 20 (4) 50

14. $\frac{1}{(\sqrt{9}-\sqrt{8})}-\frac{1}{(\sqrt{8}-\sqrt{7})}+\frac{1}{(\sqrt{7}-\sqrt{6})}-\frac{1}{(\sqrt{6}-\sqrt{5})}+\frac{1}{(\sqrt{5}-\sqrt{4})} =$

(1) 0 (2) 1
(3) 2 (4) 5

15. Let $y = x-\frac{1}{x}$, and $y+\frac{1}{y} = \frac{x^4-x^2+k}{x(x^2-1)}$. Then $k =$

(1) -1 (2) 2
(3) 0 (4) 1

16. If $\frac{9^n \times 3^5 \times (27)^3}{3\times(81)^4} = 27$, then the value of n^2-n is

(1) 3 (2) 6
(3) 12 (4) 2

17. If $a = \frac{1}{3-2\sqrt{2}}$, $b = \frac{1}{3+2\sqrt{2}}$, then $a^3+b^3-200 =$

(1) 398 (2) 2
(3) -2 (4) 198

18. $\frac{x^{a(b-c)}}{x^{b(a-c)}} \div \frac{x^b}{x^a} =$

(1) 0 (2) 1
(3) -1 (4) x^{abc}

19. $5^{\frac{1}{4}} \times (125)^{0.25} + \frac{1}{(216)^{-\frac{2}{3}}} + \frac{1}{(256)^{-\frac{3}{4}}} + \frac{1}{(32)^{-\frac{1}{5}}} =$

(1) 110 (2) 201
(3) 107 (4) 210

20. If $a^x = b$, $b^y = c$ and $c^z = a$, then $xyz =$

(1) 0 (2) 1

(3) $\frac{1}{3}$ (4) $\frac{1}{2}$

21. Solution set of the equation $|x-2| = 5$ is

(1) $\{3, -7\}$ (2) $\{-3, 7\}$
(3) $\{3, 6\}$ (4) None of these

22. The maximum value of $27-|2019x-8|$ is

(1) 27 (2) 17
(3) 44 (4) 26

23. The minimum value of $|17x-2020|-9$ is

(1) 0 (2) -9
(3) 2020 (4) 9

24. If $2a-9 = b+a$, then $(|a-b|+|b-a|) =$

(1) 18 (2) 11
(3) 1 (4) 0

25. $\frac{1}{1+x^{(b-a)}+x^{(c-a)}} + \frac{1}{1+x^{(a-b)}+x^{(c-b)}} + \frac{1}{1+x^{(b-c)}+x^{(a-c)}} =$

(1) 0 (2) 1
(3) x^{a-b-c} (4) none of these

Answers (Numbers system)

1.	(4)	31.	(1)	61.	(1)	**Level-II**	
2.	(2)	32.	(2)	62.	(2)	1.	(1)
3.	(4)	33.	(2)	63.	(4)	2.	(4)
4.	(3)	34.	(1)	64.	(2)	3.	(1)
5.	(4)	35.	(4)	65.	(2)	4.	(2)
6.	(1)	36.	(2)	66.	(1)	5.	(4)
7.	(4)	37.	(2)	67.	(3)	6.	(3)
8.	(2)	38.	(4)	68.	(1)	7.	(4)
9.	(4)	39.	(2)	69.	(3)	8.	(2)
10.	(2)	40.	(1)	70.	(4)	9.	(1)
11.	(3)	41.	(4)	71.	(1)	10.	(1)
12.	(1)	42.	(2)	72.	(2)	11.	(3)
13.	(4)	43.	(4)	73.	(2)	12.	(1)
14.	(3)	44.	(3)	74.	(1)	13.	(1)
15.	(4)	45.	(3)	75.	(3)	14.	(4)
16.	(2)	46.	(3)	76.	(3)	15.	(4)
17.	(2)	47.	(3)	77.	(2)	16.	(2)
18.	(3)	48.	(3)	78.	(1)	17.	(3)
19.	(3)	49.	(1)	79.	(1)	18.	(2)
20.	(1)	50.	(1)	80.	(1)	19.	(3)
21.	(2)	51.	(1)	81.	(4)	20.	(2)
22.	(4)	52.	(2)	82.	(2)	21.	(2)
23.	(2)	53.	(2)	83.	(4)	22.	(1)
24.	(4)	54.	(1)	84.	(1)	23.	(2)
25.	(4)	55.	(2)	85.	(1)	24.	(1)
26.	(1)	56.	(1)	86.	(4)	25.	(2)
27.	(2)	57.	(1)	87.	(2)		
28.	(3)	58.	(3)	88.	(3)		
29.	(3)	59.	(2)	89.	(1)		
30.	(4)	60.	(2)	90.	(4)		