ELITES GRID

NUMBER SYSTEM 3 (REMAINDER & FACTORS ASSIGNMENT)

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Q1 - 234a32 is divisible by 8 find sum of all possible values of a.

Q2- A number 12AB31 is divisible by 3, Which of the following cannot be the value of A+B?
2 b) 3 c) 5 d)8

Q3- The six digit number 24687X is divisible by 9 where X is a single digit whole number. Find X.

Q4- A number 12AB31 is divisible by 33, Which of the following cannot be the value of A+B?

a)11 b) 17 c) 5 d) 8

Q5- 5555555555...........500 times. Then find the remainder when it's divided by 7, 11 ,13 and 37

Q6- Find the remainder when 123123123.............123(300 digits) is divided by 504

Q7- N=123412341234....400 digits. when divided by 909 what is the remainder ?

Q8- Find the remainder when 1^39 + 2^39 + 3^39 + ...+11^39 is divided by 39

Q9- Find 2nd smallest number when divided by 5,6,7 leaves remainder 4 in each case

Q10- Find the smallest number which when divided by 11, 12 and 15 gives remainders 1,2 and 3 respectively

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Q11- A number when divided successively by 13 and 3 gives respective remainder of 5 and 1. what will be the remainder when the largest such two digit number divided by 12

Q12- A natural number N, when divided by D, leaves a remainder of 17. When 3N is divided by D if the remainder is 7, what is the remainder when 8N is divided by D

Q13- Consider a number formed by writing 2004 consecutive 9's (9999 ... 2004 times). This number is not divisible by which of the following?   1) 7 2) 13 3) 37 4) 101 5) None of these

Q14- N = 22222...............(123 times). Find remainder when it is divided by 41.

Q15- A 51-digit number N consists of fifty x's and one y, where x and y are both digits from among 0 to 9. If x = 2, N is divisible by 17 and y is the 17th digit from the right, y =
(1)   1 (2) 2 (3) 3 (4) 0

Q16- Consider N=20132013...2013, where N consists of the number 2013 repeated 2013 times. What is the remainder of N when divided by 1001?

Q17- Find remainder when 20! Is divided by 2^20.

Q18 - What is the remainder when 1^7+ 2^7+3^7+.........100^7 is divided by 7

Q19- What is the remainder 39^39 is divided by 41 ?

Q20- What is the remainder when 55^55^55 is divided by 13?

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Q21- remainder 1^4+2^4+3^4+...+100^4 divided by 7 .

Q22 - Find last two digits of 84^79

Q23- what is remainder when 7^74-5^74 is divided by 4

Q24-Find remainder 13^402 is divided by 125

Q25- If n=640640640643, what is remainder when n^2 is divided by 8.

Q26- find remainder when 2^100+2^200+----2^10000 is divided by 7

Q27- Find unit digit of (123)^36

Q28- When n is divided by 4, the remainder is 3. What is the remainder when 2n is divided by 4?

Q29- Find the remainder when 5+5^2+5^3+....+5^55 is divided by 13

Q30- Find remainder when 2^168 is divided by 125

Q31- What is the remainder when $6^{83} + 8^{83}$ is divided by 49?

Q32- Remainder when 7^{7776} is divided by 2402?

Q33- find last two digits of (37)^41

Q34- find last two digits of (121)^123

Q35. Find last 2 digits of $(201*202*203*204*246*247*248*249)^2$

Q36- 18^3+19^3+20^3+21^3 is divided by 78 .Find remainder .

Q37- Find remainder $(49)^{47}$ mod 100

Q38- Find the remainder when $7^{123} + 9^{123}$ is divided by 64.

Q39- If X = 2891 × 2892 × 2893 × .....2898 × 2899 × 2900, then what is the remainder when X is divided by 17?

Q40- $5^2 + 5^3 + 5^4+.........+5^{257}$. F ind the remainder when divided by 52

ANSWER KEYS

BEFORE CHECKING ANSWER KEYS – TRY QUESTIONS ATLEAST 2-3 TIMES

1)20   2) 3   3) X=0,9   4) 8   5) 6,0,3,18

6) 483   7)685   8)27   9) 214   10) Not possible

11) 0   12.)4   13)Not   14)17   15.) 1

16.)0   17) 2^18   18)3   19)20   20)3

21)3   22)64   23)0   24) 44   25)1

26)2   27)1   28)2   29)12   30)106

31)35   32.) 1   33) 37   34.) 61   35) 76

36) 0   37) 49   38). 48   39). 14   40). 0