

## E-LITMUS

Find the no. of ways you can fill a 3\*3 grid (with 4 corners defined as a,b,c,d) if you have 3 white marbles, 6 black marbles

P X B  
\* W Y A

\_\_\_\_\_  
O A Z O  
O N X W -  
O X N P - -

\_\_\_\_\_  
O A N Z N O  
\_\_\_\_\_

**FIND OUT THE VALUE OF LETTERS USED IN THIS.**

find the number of terms between 100 to 1000 in the format like 234

$2*3*4=24$  find the number of terms whose multiple is 24

A B C  
x D E

-----  
F E C  
D E C

-----  
H G B C

New public school have a circular layout. the school has teachers specializing in various subjects.

All classrooms of the school are equally spaced apart and located along its perimeter. Each Teacher needs

four classes in a day. there is a strange rule. the first and last class has to be in the same classroom. the

other two classes have to be at two other distinct classrooms.

**Answer the following**

a.) Bharti is a history teacher. in addition to above rule of the school she teaches exactly one pair of successive classes in adjacent classrooms. how many distinct trips to classrooms are possible for Bharti if there are 12 classrooms in school.

- 1.) 120
- 2.) 96
- 3.) 576
- 4.) 496

b.) Ram is a Math Teacher. he never teaches two successive classes in adjacent classrooms. how many distinct trips to classrooms are possible for Ram if there are 9 classrooms in the school.

- 1.) 72
- 2.) 324

3:) 30

4:) 180

Sajeed and Majeed are gambler.they love talking on final team ranking in cricket tournament.LPI cricket tournament is thier favorite.

A total of five team is participating in this year LPI(A,B,C,D,E).before the tournament begins,sajeed and majeed guess the result.

According to sajeed ranking will be A,B,C,D,E where according to majeed thier ranking will be D,A,E,C,B.At the end of tournament it turns out

that sajeed had not predicted even a single rank corectly nor he had predicted correct ordering of any pair of consecutive teams.on the other hand

majeed had predicted ranking of two teams correctly and he had also predicted ordering of two pairs of consecutive teams.

Answer the following quention

(a) :Which Team Won LPI tournament this year

1:) A

2:) B

3:) E

4:) None Of These

(b) :Which team was ranked one behind team B

1:)A

2:)C

3:)D

4:)None Of These

wht is remainder when  $128^{1000}$  is divided by 153..?

given a,b,c are in GP and  $a < b < c$ .

calculate how many solution exist for this inequality

$(\log(a) + \log(b) + \log(c)) = 6..?$

wht will be the remainder when expression

$2^2 + 22^2 + 222^2 + 2222^2 + \dots + 22222 \dots 48 \text{times}^2$  divided by 9.

you are given a number  $Q < 200$ . you have to calculate sum of All Q such that when Q divided by 5 or 7 gives remainder 2?

you are given number N.give  $2*N$  has 28 factor and  $3*N$  has 30 factor.calculate how many factor will be in  $6*N..?$

pt usha and shelly john decide to run a marathan between ramnagar and jamnagar. both start from ramnagar at 1 pm.on the way are two towns:ramgarh and rampur seprated by a distance of 15 km .pt usha reaches ramgarh in 90 minutes running at a constant speed of 40 km/hr.she takes additional 30 minutes to reach rampur.between rampur and jamnagar she maintains at average speed of  $v$  km/hr.shelly john being a professional marathan runner,maintains a constant speed of 18 km/hr.they both reach jamnagar together after  $n$  hours.what could be the total time taken by pt usha.

a:5 hours

b:15 hours

c:41 hours

d:all of the aboce.

heinz produces tomato pure by boiling tomato juice.the tomato pure has only 20% water while tomato juice has 90% water.how many liters of tomato pure will be obtained from 20

liters of tomato juice?

options:

a) 2, b)2.4 c)2.5 d) 6 liters.

AGE

\* OAT

-----

SOAR

HOG-

GOTO--

-----

GECOIR

i want to know the procedure to solve this type of questions.

A multiplication is given below where each letter stands for a single digit number and no two numbers are represented by same letter

AGE

\* OAT

-----

SOAR

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1. WHAT IS THE POSSIBLE VALUE OF A?

a)3

b)4

c)7

d)9

2. WHAT IS THE VALUE OF G+A+T+E????

a.16

b.19.

c.24

d.25

3. What is the correlation between S,I,T

a)they are in A.P

b)they are in G.P

c)both (a) and (b)

d)none of these

a quadrilateral PQRS circumscribes a circle with centre o,it is given that PQ is parallel to RS.Also length of PQ is thrice that of RS while length of QR and PS are equal.however QR and SP are not parallel to each other.the perimeter of the quadrilateral is equal to the perimeter of a square with area 36sq.m,what is the area of the quadrilateral PQRS in sqm(approx)??

why

\* nut

-----

oonp

oypy

ouha

-----

onpop

-----

each letters have digits from 0-9 find the nos?

why  
nut

-----  
o o n p  
o y p y  
o u h a

-----  
o n e p o p  
-----

find the digits of each letters from  
0-9. Each letter stand for each number in the above multiplication?

how many six digit numbers can be formed using the digits 0 to 5, without repetition such that the number is divisible by the digit at its units place?

O T O  
\* H A S

-----  
T I C O  
C H C K  
C L A I

-----  
C O O K O O

HOT\*RED= ?

If m and n are two positive integers, then what is the value of mn?

- (1)  $7m + 5n = 29$   
(2)  $m + n = 5$

If  $A = \tan 66 \tan 42$   
and  $B = \cot 66 \cot 78$   
then

(a)  $A = 2B$  (b)

1

AB

3

=

(c)  $A = B$  (d)  $3A = 2B$ .

in a strange twist of hearts ,p politicians of a country agreed to an average donation of rs.D each.Q of these politicians ,who had pledged an average of rs.A never donated the pledged money .which of the following expressions represents the percent of the pledged money that was actually donated

- a)  $100(QA/PD)$   
b)  $100(PD/QA)$   
c)  $100 - 100(QA/PD)$   
d)  $100PD - 100(QA/PD)$

what is the value of  $\log(e(e(e\dots)^{1/2})^{1/2})^{1/2}$ ?

- a)0
- b)1/3
- c)1/2
- d)1

how many values of  $c$  in the equation  $x^2-5x+c$  result in rational roots which are intergers

if  $1/a + 1/b + 1/c=1/(a+b+c)$  where  $a+b+c \neq 0, abc \neq 0$  what is the value of  $(a+b)(b+c)(c+a)$ ?

- a>equals 0
- b)greater than 0
- c)less than 0
- d)cannot be determined

PR is a tangent to a circle at point P.Q is another point on the circle such that PQ is the diameter and RQ cuts the circle at point M. If the radius of the circle is 4 units and PR=6 units then find the ratio of the perimeter of triangle PMR to the triangle PQR

- a)11/20
- b)3/5
- c)13/20
- d)18/25

the circle O having a diameter of 2cm, has a square inscribed in it.each side of the square is then taken as a diameter to form 4 smaller circles O'.find the total area of all four O' circles which is outside the cirle O.

- a)2
- b) $\pi-2$
- c) $2-\pi/4$
- d) $2-\pi/2$

if  $v,w,x,y,z$  are non negative intergers each less than 11,then how many distinct combinations are possible of  $(v,w,x,y,z)$  satisfy  $v(11^4) + w(11^3) + x(11^2) + y(11) + z=151001$

in a certain examination paper there are  $n$  questions. For  $j=1,2,3,\dots,n$ , there are  $2^{(n-1)}$  students who answered  $j$  or more question wrongly. if the total number of wrong answers is 4096 then the value of  $n$  is

- a)12
- b)11
- c)10
- d)9

how many six digit number can be formed using the digits 1 to 6, without repetition, such that the number is divisble by the digit at unit's place

6 Bangles each of 4cm in diameter, what is their minimum diameter of plate required so that each bangles are kept without overlapping (bangles touching each other)?

given  $x=123456$  and  $z=x-y$  then for how many values of  $y$ ,  $z$  value found is divide by 48, 98, 105 ????

$p, q, r$  are distinct single digit no, such that  $(10p+q)^2=110r+q$  such that each side is greater than 310..ten what is the value of  $q$ ?

how many no can be formed using digits (1,2,3,4,5,6,7,8,9)..such that they are in increasing order (eg: 0 12345, 345, 6789, 123456789)???

three dices are thrown what is the probability to get at least one six?

find the number of ways you can fill a 3x3 grid (with four corners defined as a, b, c, d) if you have 3 white marbles and 6 black marbles

the circle  $O$  having a diameter of 2cm, has a square inscribed in it. each side of the square is then taken as a diameter to form 4 smaller circles  $O'$ . find the total area of all four  $O'$  circles which is outside the circle  $O$ .

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