Question 1:

how many ordered pairs satisfy x+y-xy=49

Answer:20

Question 2:

how many words are there between **anegl** to **egnla**

if you arrange the letter of word ANGEL in all possible ways

Answer:16

question 3:

for example suppose one cluster is a,b,c,d,p the second cluster is b,m,e,g the third cluster is o,f,j,n and the (unrelated) cluster is h,i,k,l

then corresponding output could be (the first three cluster can be in any order)

b,e,m,g

o,f,n,j

a,c,d,p

a)Pyramids of Giza	b)Kochi	c)red	d)black
e)greate wall of China	f)Mumbai	g)Colosseum	h)New Delhi
i)Vadodara	j)Chennai	k)Red Fort	l)Aegean
m)Caspian	n)Taj mahal	o)Jama masjid	p)Orange

Answer:

1st-Pyramid,Colosseum,Taj,great wall

2nd-Black, red, Caspian, Aegean

3rd-Chennai, Mumbai, Kochin, Vadodra

Question No.4

The following picture depicts Thunderstorm(TH under STROM)

STORM/TH

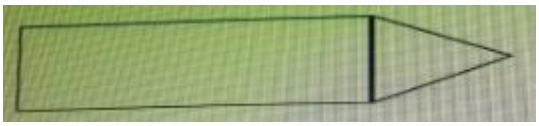
In a similar fashion, using the illustrated picture individual letters positioning of these in relation to the other, ect., identify the word/phrase depicted by

 (breed)

Answer: cross breed

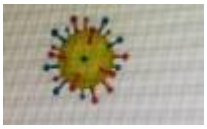
Question no.5

Given the picture



one may visualize a pencil or a tower or rocket and so on.

What comes to your mind when see the following picture? The more answer you give (that are suggested by the picture) the better



blindness test

Bactria

lemons with pens

Question.6

The words Ocean and Cube can be related through a set of words/phrases in a specific order (path) as below:

Ocean, Water, Ice, cube, Cube

in a similar way relate **Factory** and **Forest.**

a. The Score increases if you can relate them in more than one way

b. A shorter path gets higher score than a longer path.

c. Use new-line between paths.

d. Use comma between phrases in a path

Your response has been saved successfully, and will be auto marked by the system against the test cases

Answer: factory; construction; wood; forest.

factory; land; forest

factory; oven; fire; wood; forest

Question 7:

p,q are odd positive integers such that (1+3+5+....+p)+(1+3+5...+q)=1+3+5+...19 then p+q is

---divisible by 19

--- an odd number

---**divisible by 13** (Answer)

---a prime number

Question 9:

For 8 keys and 6 slots in a hashing table with uniform hashing and chaining. What is the expected number of items that particular location

2.33

2

0.75

1.33 (Answer)

Question 10:

The numbers 1 to 9 are represent by the letter A to l in some order, and no two letters represent the same number. whar are the following facts

A<H<F<D

D>B>I>H>E

C<G<A

F>B>E>A

Use these to determine which letter stands for which number, and then find the value of

(A+l)+2*(B+H)+3*(C+G)+4*(D+F)+5*E Here "*" stands for multiplication

Fill in the blanks with the answer , Do not put any white space before or after the answer

Answer: 130

Question 11:

Consider the following doubly linked list: head-1-2-3-4-5-tail

What will be the list after performing the below given sequence of operations?

Node temp = new Node(6,head,head,getNext());

head . setNext(temp);

temp . getNext() . setPrev(temp);

Node temp1= tail.getPrev();

tail.setPrev(temp1.getPrev());

temp1.getPrev().setNext(tail);

-head-6-1-2-3-4-tail

-head-6-1-2-3-4-5-tail

-head-1-2-3-4-5-6-tail

-head-1-2-3-4-5-tail

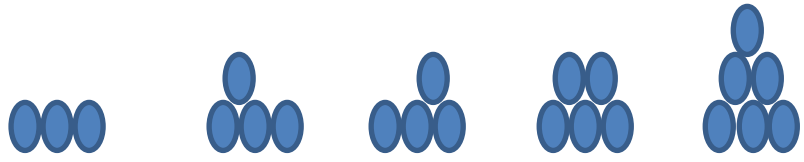
Answer:

head-6-1-2-3-4-tail

Question 12:

Being tangential to the next circle in the same row. Each pattern has the same number of circles on the base. No gaps are allowed between any two circles in any row. Every circle on any row is tangential to two circles in the lower row(It “resets” on two circles in the previous row.

The set of patterns with three circles in the base row is:



There are 5 possible patterns with a base of 3 circles, similarly 13 patterns are for 4 base circles.

In this question they will be giving information about art museum etc. These information are part of the question

Function will be provided and for that you need to find the number of patterns it can give.

Answer:

Agility questions

```
public static int findMinNumberofCircles(int k)
{
   for(int n = 1; ; n++)
   {
      int totalPatternCount = patCount(n);
      if(totalPatternCount>= (4*k))
      {
         noOfCirclesInBase = n;
         return;
      }
   }
}
```

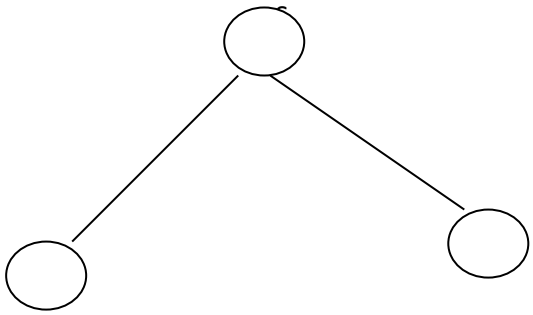
Question 13:

Depth first search (DFS) is an algorithm for searching a graph or tree data structure. The algorithm starts at the root tree and goes as far as it can down a given branch(path),and then backtracks until it find an unexplored path, and the algorithm does this until the entire graph has been explored. The main startegy of depth-first search is to explore

graph whenever possible.

figure below a search space in which the nodes are labeled with names like A,B,A1,B1 node S is the start nodes are drawn as square boxes and the other nodes in circles.

list the order in which the DFS algorithm explores the graph till it find one of the goal nodes, searching from left to right node names starting with root node till the goal node with comma between nodes. Do not type any space in your respects.



Question 14:

what does the following function do for a given binary tree?

```
int fun(struct node* root)
{
    if (root == NULL)
      return 0;
    if(root->left==NULL && root->right==NULL)
      return 0;
    return1+fun(root->left) + fun (root->right);
}
```

-Return diameter is number of edges on the longest path between any two nodes

-**Counts internal nodes (Answer)**

-Counts leaf nodes

Question:

Levenshtein distance is a string metric for measuring the different between two seqences informally, the Levenshtein distance between two words is the minimum number of single-character edits(insertions, deletions or substitutions)required to change one word into the other . these edits (insertions, deletions or substitutions) may carry the same weightage or different weightage .Let us say we want to find the Levenshtein distance between "Kittens" and sitting if the

weightage of substitution, insertion, insertion and deletion are 1 respectively. what is the Levenshtein distance between these words based on the said weightages?

6

4

9

10

Question 15:

How many points required from kittens to sitting

Points substitute - 3

Insertion-2 deletion - 1 point

Answer:

9

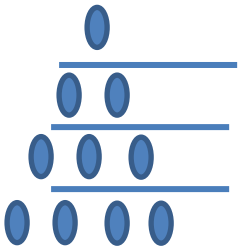
Question 16:

The Measure, warm, video relates to what?

Answer: Tape

Question 17:

How many triangles are formed?



Answer: n(n+2)(2n+1) / 8

N =3

So answer is 13

Question 18:

How many words are there between anegl to egnla.

If you arrange the letters of word Angle in all possible ways?

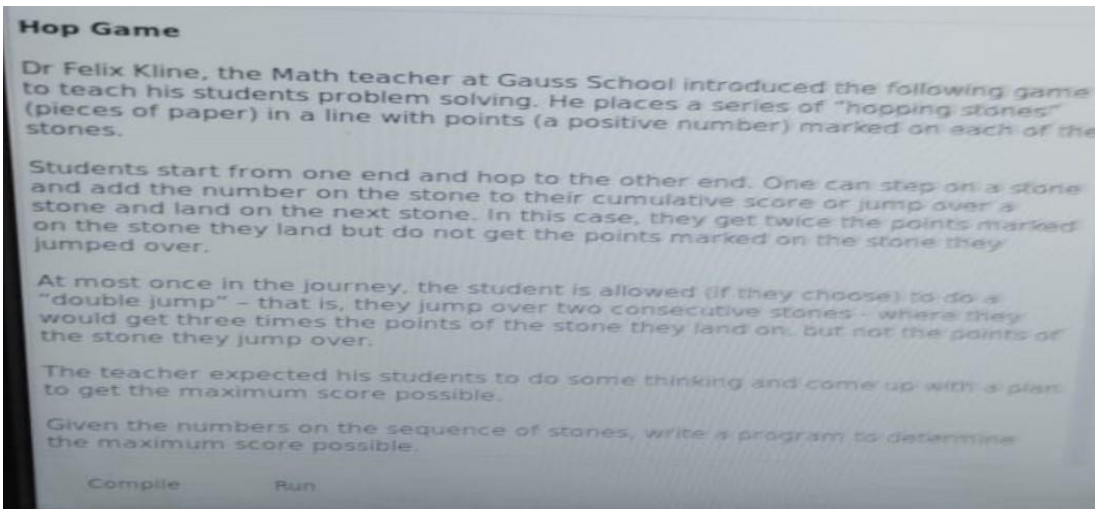
Answer: 16

Question 19:

There are 120 possible ways if we arrange the word “ANGLE”. If all 120 are arranged alphabetical order starting with AEGLN and ending with NLGEA. Which position does the word ANGLE occupy?

Answer – 22

Question 20:




```
#include<stdio.h>

int MAX(int a, int b, int c)

{

   if(a>b && a>c)

   {

      return a;

   }

   else if(b>c)
```

```
    {
        return b;
    }
    else
    {
        return c;
    }
}
int max_score(int stone_val[], int n,
              int curr_stone_index,
              int multi_factor,
              int is_double_step_taken)
{
if(curr_stone_index>= n)
    {
        return 0;
    }
     int score = 0;
if(curr_stone_index != -1)
    {
        score = multi_factor * stone_val[curr_stone_index];
    }
    // No Skipping
    // Moving to next stone
    int val1 = max_score(stone_val, n,
curr_stone_index + 1,
                         1, // multipli. factor
```

```
is_double_step_taken);

   // Skipping once
   // multi factor = 2
   int val2 = max_score(stone_val, n,
curr_stone_index + 2,
                  2, // multipli. factor
is_double_step_taken);

   int val3 = 0;
if(is_double_step_taken == 0)
   {
      val3 = max_score(stone_val, n,
curr_stone_index + 3,
                  3, // multipli. factor
                  1 /* set double step taken */);
   }

   int max_score_among_3_options = MAX(val1, val2, val3);
   int total_Score = score + max_score_among_3_options;
   return total_Score;
}

int main()
{
   // int n = 3;
   // int stone_val[] = {4,2,3};
```

```
    int n = 6;
    int stone_val[] = {4,5,6,7,4,5};
printf("%d", max_score(stone_val, n,
                    -1, // Current step
1,  // Multi factor
                    0 /* Double step taken */));

    return 0;
}
```

Question 20:

One man moves forward or backward. Probability to forward or backward is 1/2. Total he can take 6 steps. What is the probability he reaches starting point?

Answer: 5/16

Question 21:

A=1^n(-4)+ 2^n(-4)+ 3^n(-4)+.....

B=1^n(-4)+ 3^n(-4)+ 5^n(-4)+.....

find A/B=

Answer: 16/15

Question 22

Given set of 'n' (7 or 9) docs in a circumference of a circle,how many equilateral triangles can be formed

Question 23

ab313ab is divisible by 12 then the smallest value of a+b where a,b > 0

3

6

7 (Answer)

13

Question 24

The following picture depicts Thunderstorm(TH under STROM)

STORM/TH

In a similar fashion, using the illustrated picture individual letters positioning of these in relation to the other, ect., identify the word/phrase depicted by

H p

0 O

P H

Answer: Hop up and down

Question 25

Construct the English words for minimum length Four using the characters of the words **operations**

Aswer:
Atropine
Operant
Painter
Pointer
Repaint
Portion

Stoner
Enroot
Option
Parent
Retain
Proton

Question: 26

Question incomplete :

3 people, a, b and c attempt an MCQ test.

Their responses are as follows :
*A: t t t f f f f
*B:t f t t f f f
*C: t f t f t t t

A scored 5
B scored 7
Comment about Cs score.

* the values are not exact.

Answer

Question 27

Perspective meaning

Answer view point

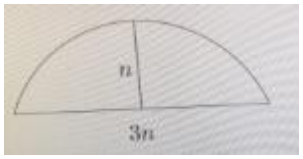
Question 28

Proxy war meaning

Meaning: War fought by two powers by using a supplement country in between.

Question 29

A chord of a circle has length 3n, where n is a positive integer. The segment cut off by the chord has height n, as shown what is smallest value of n for which the radius of the circle is also a positive integer?



Please do not white space around the answer

Answer: 100

Question 30

A plane can be divided into 2 regions by one line, 4 regions by two lines, and 7 regions by three lines

What is the maximal number of regions that a plane can be divided into by 100 lines?

a)4051

b)5051

c)7051

d)6051

Answer: 5051

Question 31

A Quadratic polynomial f satisfies f(x)>= 1 for all x, f(2)=1, and f(3)=3

What is f(5)?

a)Cannot be found from the given information

b)19

c)9

d)25

Answer: Cannot be found from the given information

Question 32:

Six points are marked on the circumference of a circle and all the pairs of points are joining by straight lines. No three lines have a common point and any two intersect at a point inside the circle. Into how many regions is the interior of the circle divided by these lines?

A)32

B) none of these

C)24

D)31

Answer: 32

Question 33:

$x/a = y/b=z/c=2018$

$xy=(a+b)(b+c)(c+a)/abc(x+y)(y+z)(z+x)$

Answer: 1

Question 33

7 letters are to be deliver to 7 addresses. In how many ways can all the letters can be deliver to wrong address

Answer: 1854

Question 34

The word night, wrist and stop can be linked to Watch similarly what is the forth word linking

Right, cat , carbon

Answer: Copy

Question 35:

Suppose s is a set of positive integer , each of witch is less than 25 such that no two elements of s has a common divisor greater then one. What is the largest possible number of elements in s?

Answer : 10

Question 36:

A function f satisfies f(0)=0, f(2n)=f(n), and f(2n+1)=f(n)+1 for all positive integer n. What is value of f(2018)?

Answer: 2

Question 37:

How many pairs (m,n) of integers satisfy the equation 4^m=n^2+15?

Answer : (2,1)(3,7)

Question 38:

Suppose S is a set of positive integer , each of which is less than 25, such that no two elements of S have a common divisor greater than 1. What are the possible numbers of elements in 5?

A)10

b)5

c)8

d)12

Answer:10

Question 40:

The following picture depicts Thunderstorm(TH under STROM)

STROM/TH

In similar fashion, using the illustrated picture. Individual letters positioning of these in relation to the other ect., identify the word/phrase depicted by

O_ER_T_O_

Answer: Painless operation

Question 41:

Create English Words of Minimum length 4 using the character from the word commercial

No credit will be given for proper nouns(Names of cities, people, gods) or for repeating the given words, Also, Non English words are not allowed

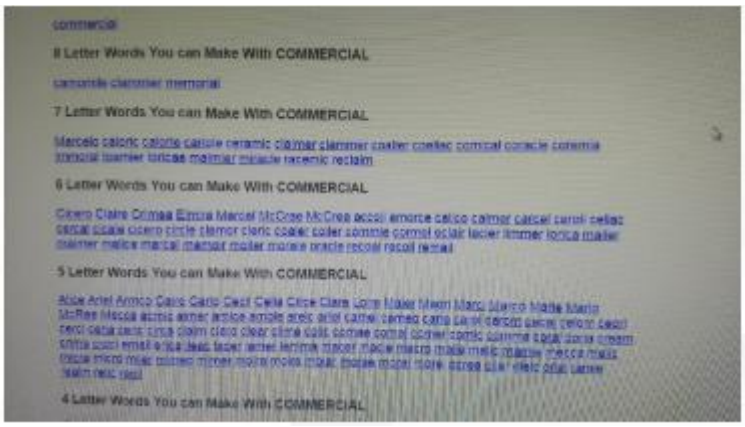
a. bigger the word, higher the score

b. More the words, more the score. Duplicates are ignored

c. A character can be repeated only as many times present in the

d. Use new line between words

Answer:



Question 42:

The inorder and preorder traversal of a binary tree b d e a f c g and a b d e c f g respectively . the postorder traversal of the binary tree is

a)e d b g f c a

b) e d b f g c a

c) d e b f g c a

d) d e f g b c a

Answer: d e b f g c a

Question 43:

Consider a hash table with 100 slot. Collisions are resolved using Chaining. Assuming simple uniform hashing probability that the first 3 slot are unfilled after the first 3 insertions?

a) (97 x 96 x 95)/(3! X 1003)

b) (97 x 96 x 95)/ 1003

c) (97 x 97 x 97)/ 1003

d) (99 x 98 x 97)/ 1003

Answer: (97 x 97 x 97)/ 1003

Question 44:

It is the sports event of the year for the residents of Shortsville. Their team had finally made it to the final of the Bowls League Cup

They have booked tickets for city contingent for the same row and the size of the contingent (N) in smaller than the number of seats booked(S). Unfortunately there was rain the previous night and some of the seats still wet. Some of the contingent love bowls so much and are excited enough not to mind sitting on a wet chair. There are k of these however other want to sit on a dry seats so that they can enjoy the match more.

The contingent wants to minimum the distance between the first and last person in the row so that they can still conduct Mexican waves and other forms of support for their team.

Because they want to sit together any block of 15 or more contiguous unoccupied seats between the first person sitting and the last person sitting is unacceptable.

There are M blocks of seats. Starting with a dry block with alternating wet and dry blocks. The number of seats in each block is known.

Input

The first line contains four comma separated numbers representing the number of seats in each block of seats in each blocks of seats. The first block is dry and the remaining blocks alternated between wet and dry

Output

One integer representing the minimum distance between the first and last member of the row. If it is impossible to seat all the members according to their preferences, and with the unoccupied seat restriction, the result should be 0.

Constrains:

S, N, K < 1000, M<30

Example1:

Input

100,50,5,8

3,7,10,10,20,10,20,20

Output

64

Explanation

S=100 and there are 100seats in the row N=50, and there are 50 members in the contingent k=5, and 5 people (out of the 50) do not mind sitting on wet seats M=8 and there are 8 blocks of seats

Answer:

Question 45:

1->coin

(H) ½ ½ (T)

HHH 3-> THH->(4)

Answer: 3+5 =5

Question 46:

How many possible pairs of m and n?

4^n m=n^2 +15 (m,n)

Answer: 4

Question 47:

Synonym for RAVE

A) Admit

b) Party

c)rant

d)blabber

Answer : Blabber