**SOURCE CODE(Using C++)**

**(Using CodeBlocks 16.01)**

**PROBLEM 1**

#include<iostream>

using namespace std;

int main()

{

int s=0;

for(int i=1;i<1000;i++)

{

if((i%3==0) || (i%5==0))

s=s+i;

}

cout<<s;

return 0;

}

**PROBLEM 2**

#include<iostream>

using namespace std;

int main()

{

long int a=1,b=2,c=0,s=0,n=4000000;

c=a+b;

while(c<=n)

{

if(c%2==0)

s=s+c;

a = b;

b = c;

c = a + b;

}

cout<<(s+2);

return 0;

}

**PROBLEM 3**

#include <stdio.h>

#include <math.h>

#define NUMBER 600851475143

int isPrime(int test)

{

int k=0;

int s=( (int) sqrt(test) );

for(k = 3; k <= s; k+=2)

{

if(test % k == 0)

{

return 0;

}

}

return 1;

}

int main()

{

int j=0;

int k=0;

while(1)

{

for(k=3; ; k+=2)

{

if(isPrime(k))

{

if(NUMBER%k==0)

j=k;

if(k>=(sqrt(NUMBER)))

goto END;

}

}

}

END:

printf("%d", j);

return 0;

}

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**PROBLEM 4**

#include <stdio.h>

static int palindrome(unsigned int n);

int main(void)

{

unsigned int i, j, zmax = 0;

for (i = 100; i <= 999; i++)

{

for (j = 100; j <= 999; j++)

{

unsigned int p = i\*j;

if (palindrome(p) && p > zmax)

{

zmax = p;

}

}

}

printf("%u\n", zmax);

return 0;

}

int palindrome(unsigned int n)

{

unsigned int rev = 0, t = n;

while (t)

{

rev = 10\*rev + (t % 10);

t /= 10;

}

return rev == n;

}

**PROBLEM 5**

#include<iostream>

using namespace std;

int main()

{

long int i,j;

for( i=2521;;i++)

{

for( j=1;j<=20;j++)

{

if(i%j==0)

continue;

else

break;

}

if(j==21)

break;

}

cout<<i;

return 0;

}

**PROBLEM 6**

#include <iostream>

using namespace std;

int main() {

long sqr=0,sumsqr=0,sqrsum=0,sum=0,dif=0;

for(int i=1;i<=100;i++)

{

sqr=i\*i;

sumsqr=sumsqr+sqr;

sum=sum + i;

}

sqrsum=sum\*sum;

dif=sqrsum-sumsqr;

cout<<"difference="<<dif;

return 0;

}

**PROBLEM-7**

#include<iostream>

using namespace std;

int main()

{

int flag,n=10001,c=0;

for(long int i=2;i<=1000000;i++)

{

flag=0;

for(long int j=2;j<=i/2;j++)

{

if(i%j==0)

{

flag=1;

break;

}

}

if(flag==0)

c++;

if(c==n)

{

cout<<"10001st Prime Number is: " <<i;

break;

}

}

return 0;

}

**PROBLEM 8**

#include<iostream>

using namespace std;

int main()

{

const string num="7316717653133062491922511967442657474235534919493496983520312774506326239578318016984801869478851843858615607891129494954595017379583319528532088055111254069874715852386305071569329096329522744304355766896648950445244523161731856403098711121722383113622298934233803081353362766142828064444866452387493035890729629049156044077239071381051585930796086670172427121883998797908792274921901699720888093776657273330010533678812202354218097512545405947522435258490771167055601360483958644670632441572215539753697817977846174064955149290862569321978468622482839722413756570560574902614079729686524145351004748216637048440319989000889524345065854122758866688116427171479924442928230863465674813919123162824586178664583591245665294765456828489128831426076900422421902267105562632111110937054421750694165896040807198403850962455444362981230987879927244284909188845801561660979191338754992005240636899125607176060588611646710940507754100225698315520005593572972571636269561882670428252483600823257530420752963450";

unsigned long long int mxprdct=0;

unsigned long long int product;

for(int i=0;i<num.length()-12;i++)

{

product=((int)num[i]-48);

for(int j=i+1;j<i+13;j++)

{

product=product\*((int)num[j]-48);

if(product>=mxprdct)

{

mxprdct=product;

}

}

}

cout<<mxprdct<<endl;

return 0;

}

**PROBLEM 9**

#include<stdio.h>

#include<iostream>

using namespace std;

unsigned long int p=0;

void py(long int limit)

{

long int a, b, c = 0;

long int m = 2;

while (c < limit)

{

for ( long int n = 1; n < m; ++n)

{

a = m \* m - n \* n;

b = 2 \* m \* n;

c = m \* m + n \* n;

if (c > limit)

break;

if((a+b+c)==1000)

p=a\*b\*c;

}

m++;

}

}

int main()

{

long int limit = 998;

py(limit);

printf("%lu",p);

return 0;

}

**PROBLEM 10**

#include<iostream>

using namespace std;

int main()

{

int flag=0;

unsigned long long int s=0;

unsigned long long int l=2000000;

for(unsigned long long int i=1;i<=l;i++)

{

flag=0;

for(unsigned long long int j=2;j<=i/2;j++)

{

if(i%j==0)

{

flag=1;

break;

}

}

if(flag==0)

s=s+i;

}

cout<<s;

return 0;

}

xxxxxxx ***THE END*** xxxxxxx