(105)10

|  |  |  |
| --- | --- | --- |
| 2 | 105 |  |
| 2 | 52 | 1 |
| 2 | 26 | 0 |
| 2 | 13 | 0 |
| 2 | 6 | 1 |
| 2 | 3 | 0 |
| 2 | 1 | 1 |
|  | 0 | 1 |

0(sign bit)1101001

1’complement:10010110

2’s complement:10010111

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 |
| -128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| -128 | 0 | 0 | 16 | 0 | 4 | 2 | 1 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

10110110

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| -128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| -128 | 0 | 32 | 16 | 0 | 4 | 2 | 0 |
|  |  |  |  |  |  |  |  |

-128+32+16+4+2=-74

10110101

1001010

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| 0 | 64 | 0 | 0 | 8 | 0 | 2 | 0 |
|  |  |  |  |  |  |  |  |

64+8+2=74

HCF of two numbers:

STEP 1:Begin

STEP 2:Input n,m

STEP 3:Find the minimum of the two numbers and store it in a variable a

STEP 4:i=1

STEP 5:Compute n%i & m%i

STEP 6:If both the values are 0, I is common factor of n amd m;h=i

STEP 7:i=i+1

STEP 8:repeat steps 5-7 till i=a

STEP 9:h is hcf of n and m

STEP 10:print h

STEP 11:end

LCM

STEP 1:begin

STEP 2:input n,m

STEP 3:x=n

STEP 4:compute x%m

STEP 5:if 0 then lcm=x otherwise x=x+n

STEP 6:repeat step 4 and 5 till x%m not equal to 0

STEP 7:print x as lcm

STEP 8: end

|  |  |  |
| --- | --- | --- |
| n | m | x |
| 20 | 36 | 20 |
| 20 | 36 | 40 |
| 20 | 36 | 60 |
| 20 | 36 | 80 |
| 20 | 36 | 100 |
| 20 | 36 | 120 |
| 20 | 36 | 140 |
| 20 | 36 | 160 |
| 20 | 36 | 180 |
|  |  |  |
|  |  |  |

S=1+2+5+12+29+70……n terms

ALGORITHM:

STEP 1:begin

STEP 2:accept n

STEP 3:s=0;i=1;a=0;b=1;c=0;

STEP 4:s=s+b

STEP 5:c=b\*2+a

STEP 6:a=b,b=c

STEP 7:i=i+1

STEP 8:repeat steps 4-7 till i=n

STEP 9:print s

STEP 10:end

STEP 1:begin

STEP 2:accept a word and store in a;w=””

STEP 3:convert a in uppercase using built in func

STEP 4:find length of a using built in func and store in l

STEP 5:run a loop and extract the letters and store it in a variable ch

STEP 6:ch=ch+l

STEP 6.1:if ch>90 ch=ch-26

STEP 7:w=w+ch

STEP 8:repeat steps 5-7 till value of variable =l-1

STEP 9:display w

STEP 10: end

Homework

*1.Accept a number.Find the number of digits.Run a loop to extract the digits and raise each digit to the power of number of digits & keep on adding these values in a variable.Finally if the sum=original number NARCISSISTIC NUMBER.*

*2.Accept a number* *and check whether it is a three digit number or not.If yes, then multiply the original number by 2 and 3.The other 2 nos. should be 3 digit number.Now if we consider the 3 numbers and observe that together that they contain the digit 1-9 then such numbers are called FASCINATING NUMBER.*