Loop related problems (total 20 questions)

SL		Problem statement	Difficulty levels
1.	Write a program that upto N th terms.	will take a number N from the keyboard and print following series	*
		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14,	
	Sample input	Sample output	
	2	1, 2	
	5	1, 2, 3, 4, 5	
	11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	
2.	Write a program that	will print following series upto N th terms.	*
		5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31	
	Sample input	Sample output	
	2	1, 3	
	5	1, 3, 5, 7, 9	
	11	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21	
3.		will print following series upto N th terms.	**
3.		will print following series upto N th terms. 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1,	**
3.		1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1,	**
3.	Write a program that Sample input 1	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1,	**
3.	Write a program that Sample input 1 2	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output 1 1, 0	**
3.	Write a program that Sample input 1	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output 1 1, 0 1, 0, 1	**
3.	Write a program that Sample input 1 2 3 4	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output 1	**
3.	Write a program that Sample input 1 2 3 4 7	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output 1	**
3.	Write a program that Sample input 1 2 3 4	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output 1	**
3. 4.	Write a program that Sample input 1 2 3 4 7 13	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output 1	**
	Write a program that Sample input 1 2 3 4 7 13	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output	
	Write a program that Sample input 1 2 3 4 7 13 Write a program that (Restriction: Without	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output	
	Write a program that Sample input 1 2 3 4 7 13 Write a program that (Restriction: Without Sample input 3	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output	
	Write a program that Sample input 1 2 3 4 7 13 Write a program that (Restriction: Without	1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, Sample output	

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22.4 11.1			-
Write a program that w	vill take two numbers	X and Y as inputs. Then it will print the	*
square of X and increm	ent (if X<y< b="">) or decrer</y<>	ment (if X>Y) X by 1, until X reaches Y. If and	
when X is equal to Y , th	ne program prints "Re	eached!"	
•	. • .		
Sample in	nut/Y V)	Sample output	
10 5	ραι(λ,1)		
		100, 81, 64, 49, 36, Reached!	
5 10		25, 36, 49, 64, 81, Reached!	
10 10		Reached!	
NA/vita a range grant for the			**
Write a program for the			**
		to guess that number within N tries. For each	
		"Wrong, N-1 Choice(s) Left!" If Player-2 at	
any time successfully g	uesses the number, tl	he program prints "Right, Player-2 wins!" and	
terminates right away.	Otherwise after the o	completion of N wrong tries, the program	
prints "Player-1 wins!"	and halts.		
(Hint: Use break/contin	nue)		
(Times osc si carly conten	idej		
	Г		
Sample input		Sample output	
(X,N,n1, n2,,nN)			
5	Wrong, 2 Choice(s) L	.eft!	
3	Wrong, 1 Choice(s) L	₋eft!	
12 8 5	Right, Player-2 wins	!	
100	Wrong, 4 Choice(s) I		
5			
50 100	Right, Player-2 wins		
50 100	Right, Player-2 wins	!	
50 100 20	Right, Player-2 wins Wrong, 2 Choice(s) I	eft!	
50 100 20 3	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I	eft! Left!	
50 100 20	Wrong, 2 Choice(s) L Wrong, 1 Choice(s) L Wrong, 0 Choice(s) L	eft! Left!	
50 100 20 3	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I	eft! Left!	
50 100 20 3	Wrong, 2 Choice(s) L Wrong, 1 Choice(s) L Wrong, 0 Choice(s) L	eft! Left!	
50 100 20 3	Wrong, 2 Choice(s) L Wrong, 1 Choice(s) L Wrong, 0 Choice(s) L	eft! Left!	
50 100 20 3 12 8 5	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I Wrong, 0 Choice(s) I Player-1 wins!	eft! Left! Left!	
50 100 20 3 12 8 5	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I Wrong, 0 Choice(s) I Player-1 wins!	eft! Left!	*
50 100 20 3 12 8 5	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I Wrong, 0 Choice(s) I Player-1 wins!	eft! Left! Left!	*
50 100 20 3 12 8 5 Write a program that we keyboard.	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I Wrong, 0 Choice(s) I Player-1 wins!	eft! Left! Left! Looard inputs until the user types an 'A' at the	*
50 100 20 3 12 8 5 Write a program that we keyboard. Sample	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I Wrong, 0 Choice(s) I Player-1 wins!	eft! Left! Left! Looard inputs until the user types an 'A' at the Sample output	*
50 100 20 3 12 8 5 Write a program that we keyboard. Sample X	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I Wrong, 0 Choice(s) I Player-1 wins!	eft! eft! coard inputs until the user types an 'A' at the Sample output Input 1: X	*
50 100 20 3 12 8 5 Write a program that we keyboard. Sample X 1	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I Wrong, 0 Choice(s) I Player-1 wins!	eft! Left! Left! Looard inputs until the user types an 'A' at the Sample output Input 1: X Input 2: 1	*
50 100 20 3 12 8 5 Write a program that we keyboard. Sample X	Right, Player-2 wins Wrong, 2 Choice(s) I Wrong, 1 Choice(s) I Wrong, 0 Choice(s) I Player-1 wins!	eft! eft! coard inputs until the user types an 'A' at the Sample output Input 1: X	*

	14/2:		سالنين خمطه مص	a.a +b.a diai+a	of on inner :			**
8.	VVII	te a progra	m that will r	everse the digits	or an input ir	iteger.		
			Sample inp	+		Sample outp	244	
	12	F70	Sumple imp	uı	07524	Sumple outp	Jul	
	l -	579 24			97531			
	43	<u> </u>			1234			
9.	\	to a progra		ind the grade of	N students F	or oach studon	t it will take the	*
9.				ind the grade of				
				· ·), class test (on 15	
		• •	•	arks), term final (s). Then based (on the tables	
	sno	wn below,	tne program	will output his g	rade.			
				Attendance (A	A)	5%		
				Assignments ((HW)	10%		
				Class Tests (C	CT)	15%		
				Midterm (MT)	30%		
				Final (TF)	,	40%		
			L	Timal (11)		4070		
		Marks	Letter Grad	e Marks I	Letter Grade	Marks	Letter Grade	
		90-100	A	70-73	C+	Less than 55	F	
		86-89	A-	66-69	$\frac{C^+}{C}$	Less than 33	1,	
		82-85	B+	62-65	C-			
				+				
		78-81	В	58-61	D+			
		74-77	B-	55-57	D			
	_				Τ		1	
	l	mple input	(A,HW,CT,N	/IT,TF)	Sample ou	•		
	2			_	Student 1			
	5	10 15	44.5 92		Student 2	: F		
	0	7.5 5	20 55	.5				
10.	Wri	te a progra	m that will g	ive the sum of fi	rst N th terms	for the followin	g series.	**
		1 0	_				J	
			1, -2, 3	8, -4, 5, -6, 7, -8, 9	9, -10, 11, -12	, 13, -14,		
					1		_	
			Sample inp	ut	 	Sample outp	out	
	2				Result: -1			
	3				Result: 2			
	4				Result: -2			

		means multiplication] $2^{2}.3 + 3^{2}.4 + 4^{2}.5 + \dots$	
Samp	le input	Sample output	
2		Result: 14	
3		Result: 50	
4		Result: 130	
7		Result: 924	
Vrite a program that		acci series upto N th terms. , 8, 13, 21, 34, 55, 89,	**
Sample input		Sample output	
1	1		
	1, 1		
2	-, -		
7 Vrite a program that	1, 1, 2, 3 1, 1, 2, 3, 5, 8	, 13 ctorial (N!) of a given number N . Please see th	ne **
7	1, 1, 2, 3 1, 1, 2, 3, 5, 8		ne **
4 7 Write a program that	1, 1, 2, 3 1, 1, 2, 3, 5, 8		ne **
4 7 Vrite a program that ample input output. Sample input 1	1, 1, 2, 3 1, 1, 2, 3, 5, 8	ctorial (N!) of a given number N . Please see th	ne **
4 7 Vrite a program that ample input output. Sample input 1 2	1, 1, 2, 3 1, 1, 2, 3, 5, 8	Sample output 1! = 1 = 1 2! = 2 X 1 = 2	ne **
7 Vrite a program that ample input output. Sample input 1 2 3	1, 1, 2, 3 1, 1, 2, 3, 5, 8	Sample output 1! = 1 = 1 2! = 2 X 1 = 2 3! = 3 X 2 X 1 = 6	ne **
4 7 Write a program that cample input output. Sample input 1 2	1, 1, 2, 3 1, 1, 2, 3, 5, 8	Sample output 1! = 1 = 1 2! = 2 X 1 = 2	ne **
Vrite a program that cample input output. Sample input 2 3 4	1, 1, 2, 3 1, 1, 2, 3, 5, 8 will print the fac	Sample output 1! = 1 = 1 2! = 2 X 1 = 2 3! = 3 X 2 X 1 = 6	** **
Vrite a program that ample input output. Sample input 2 3 4 Vrite a program that Sample input	1, 1, 2, 3 1, 1, 2, 3, 5, 8 will print the factors will find "C _r whe	Sample output 1! = 1 = 1 2! = 2 X 1 = 2 3! = 3 X 2 X 1 = 6 4! = 4 X 3 X 2 X 1 = 24	
7 Write a program that ample input output. Sample input 2 3 4 Write a program that Sample input 5 2	1, 1, 2, 3 1, 1, 2, 3, 5, 8 will print the factors will find "C _r wheelets and the second se	Sample output 1! = 1 = 1 2! = 2 X 1 = 2 3! = 3 X 2 X 1 = 6 4! = 4 X 3 X 2 X 1 = 24 ere n >= r; n and r are integers.	
Vrite a program that ample input output. Sample input 2 3 4 Vrite a program that Sample input 5 2 10 3	1, 1, 2, 3 1, 1, 2, 3, 5, 8 will print the fact will find ⁿ C _r whee 10 120	Sample output 1! = 1 = 1 2! = 2 X 1 = 2 3! = 3 X 2 X 1 = 6 4! = 4 X 3 X 2 X 1 = 24 ere n >= r; n and r are integers.	
7 Write a program that ample input output. Sample input 2 3 4 Write a program that Sample input	1, 1, 2, 3 1, 1, 2, 3, 5, 8 will print the factors will find "C _r wheelets and the second se	Sample output 1! = 1 = 1 2! = 2 X 1 = 2 3! = 3 X 2 X 1 = 6 4! = 4 X 3 X 2 X 1 = 24 ere n >= r; n and r are integers.	

	T		1
45	14/2:4		*
15.	Write a program that \	will find x^y (x to the power y) where x, y are positive integers.	
	Sample input(x,y)	Sample output	
	5 2	25	
	2 0	1	
	6 1	6	
	0 5	0	
16.	WAP that will find the of two positive integer	GCD (greatest common divisor) and LCM (least common multiple) rs.	**
	Sample input	Sample output	
	5 7	GCD: 1	
		LCM: 35	
	12 12	GCD: 12	
		LCM: 12	
	12 32	GCD: 4	
		LCM: 96	
17.	WAP that will determine	ne whether a number is prime or not.	**
	Sample input	Sample output	
	1	Not prime	
	2	Prime	
	11	Prime	
	39	Not prime	
	101	Prime	
18.	WAD that will datarmi	ne whether an integer is palindrome number or not.	**
10.		ne whether all integer is paintaronie number of not.	
	Sample input	Sample output	
	9	Yes	
	91	No	
	222	Yes	
	12321	Yes	
	110	No	
i	<u> </u>		

series to solve the pro ${\cal Sin}.$	$x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots \dots \infty$	
Sample input	Sample output	
1	0.841	
2	0.909	
3	0.141	
3	t takes an integer number n as input and find out the sum of the	**
3 Write a program tha	t takes an integer number n as input and find out the sum of the on terms.	**
3 Write a program tha following series up to	0.141 It takes an integer number n as input and find out the sum of the on terms. 1 + 12 + 123 + 1234 +	**
3 Write a program tha following series up to Sample input	0.141 It takes an integer number n as input and find out the sum of the n terms. 1 + 12 + 123 + 1234 + Sample output	**
Write a program that following series up to Sample input	0.141 It takes an integer number n as input and find out the sum of the on terms. 1+12+123+1234+ Sample output 1	**