29/07/2020

Q.

1	2	3	4	5
	4	6	8	10
		9	12	15
			16	20
				25

```
#Include<stdio.h>
void main () {
        Int num=1;
        For(Int row=1 ; row<=5; row++) {
                Int num2=num;
               For(Int space=1;space<row;space++)) {
                        printf("\t");
                    }
               for (Int col=5 ; col>=row; col--){
                        printf("%.dt", row * num2);
                        num2++;
                    }
                num++;
                printf ("\n");
            }
    }
```

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- Dry Run

variables					conditions		statement		Incre/decre
num	row	num2	space	col	row<=5	space<row	pf(" ")	col>=row	pf(row*num)
1	1	1	1	5	1<=5	1<1	X	5>=1	1
		2		4				4>=1	2
		3		3				3>=1	3
		4		2				2>=1	4
		5		1				1>=1	5
				0				0>=1 X	
2	2	2	1	5	2<=5	1<2	—	5>=2	4
		3	2	4		2<2 X		4>=2	6
		4		3				3>=2	8
		5		2				2>=2	10
				1				1>=2 X	
3	3	3	1	5	3<=5	1<3	—	5>=3	9
		4	2	4		2<3	—	4>=3	12
		5	3	3		3<3 X		3>=3	15
				2				2>=3 X	
4	4	4	1	5	4<=5	1<4	—	5>=4	16
		5	2	4		2<4	—	4>=4	20
			3	3		3<4	—	3>=4 X	
			4			4<4 X			
5	5	5	1	5	5<=5	1<5	—	5>=5	25
		6	2	4		2<5	—	4>=5 X	
			3			3<5	—		
			4			4<5	—		
			5			5<5	X		
6					6<=5 X				

Q. 2

1	2	3	4	5
	3	4	5	6
		5	6	7
			7	8
				9

```
#include <stdio.h>
void main ()
    int num=1;
    for(int row=1 ;row<=5; row++){
        int num2 = num;
        for(int space =1 ; space<row; space++){
            printf ("\t");
        }
        for (int col=5; col>=row; col --){
            printf("%d\t", num2);
            num2++;
        }
        printf("\n");
        num+=2;
    }
}
```

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• Dry Run

variables					Condition	statement		Increase/decre
num1	row	num2	space	col	row<=5	space<row	pf(" ")	col>=row pf(num2)
1	1	1	1	5	1<=5	1<1 X		5>=1 1
		2		4				4>=1 2
		3		3				3>=1 3
		4		2				2>=1 4
		5		1				1>=1 5
				0				0>=1 X
3	2	3	1	5	2<=5	1<2 -		5>=2 3
		4	2	4		2<2 X		4>=2 4
		5		3				3>=2 5
		6		2				2>=2 6
		7		1				1>=2 X
5	3	5	1	5	3<=5	1<3 -		5>=3 5
		6	2	4		2<3 -		4>=3 6
		7	3	3		3<3 X		3>=3 7
				2				2>=3 X
7	4	7	1	5	4<=5	1<4 -		5>=4 7
		8	2	4		2<4 -		4>=4 8
			3	3		3<4 -		3>=4 X
			4			4<4 X		
9	5	9	1	5	5<=5	1<5 -		5>=5 9
			2	4		2<5 -		4>=5 X
			3			3<5 -		
			4			4<5 -		
			5			5<5 X		
11	6				6<=5 X			

Q.3

1	2	6	24	120
	1	2	6	24
		1	2	6
			1	2
				1

```
#Pnclude <stdio.h>
void main() {
    for(Pnt row=1 ; row<=5 ; row++){
        Pnt fact=1, num=1;
        for(Pnt space=1; space<row; space++){
            printf("\t");
        }
        for(Pnt col=5; col>=row ; col--){
            fact = fact * num;
            printf("%d\t", fact);
            num++;
        }
        printf("\n");
    }
}
```

- Dry Run

variables					conditions	statements			Incre/decre
row	space	fact	col	num	row<=5	space<row	pf(" ")	col>=row	pf(fact)
1	1	1	5	1	1<=5	1<1 X			
		1	4	2				5>=1	1
		2	3	3				4>=1	2
		6	2	4				3>=1	6
		24	1	5				2>=1	24
		120	0	6				1>=1	120
								0>=1 X	
2	1	1	5	1	2<=5	1<2	-	5>=2	1
	2	1	4	2		2<2 X		4>=2	2
		2	3	3				3>=2	6
		6	2	4				2>=2	24
		24	1	5				1>=2 X	
3	1	1	5	1	3<=5	1<3	-	5>=3	1
	2	1	4	2		2<3	-	4>=3	2
	3	2	3	3		3<3 X		3>=3	6
		6	2	4				2>=3 X	
4	1	1	5	1	4<=5	1<4	-	5>=4	1
	2	1	4	2		2<4	-	4>=4	2
	3	2	3	3		3<4	-	3>=4 X	
	4					4<4	-		
5	1	1	5	1	5<=5	1<5	-	5>=5	1
	2	1	4	2		2<5	-	4>=5 X	
	3					3<5	-		
	4					4<5	-		
	5					5<5	-		
6					6<=5 X				

Q.4

1	4	9	16	25
	216	343	512	729
		100	121	144
			2197	2744
				225

```
#Include<stdio.h>
void main (){
    Int num=1
    For(Int row=1; row<=5; row++){
        For(Int space=1; space<row; space++){
            printF(" ");
        }
        for(Int col=5; col>=row; col--){
        PF(row%2>0){
            printf("%d\t", num*num);
            num++;
        }
        else{
            printf("%d\t", num*num*num);
            num++;
        }
    }
    printF("\n");
}
}
```

- dry Run

variables | conditions | statements | incre/decre

num	row	space	col	row<=5	space<row	pf(" ")	col>=row	pf(evn)	pf(num^3)	else (num^2)
1	1	1	5	1<=5	1<1 X		5>=1			1
2			4				4>=1			4
3			3				3>=1			9
4			2				2>=1			16
5			1				1>=1			25
6			0				0>=1 X			
6	2	1	5	2<=5	1<2	—	5>=2	216		
7		2	4		2<2 X		4>=2	343		
8			3				3>=2	512		
9			2				2>=2	729		
10			1				1>=2 X			
10	3	1	5	3<=5	1<3	-	5>=3			100
11		2	4		2<3	-	4>=3			121
12		3	3		3<3	-	3>=3			144
13			2				2>=3 X			
13	4	1	5	4<=5	1<4	-	5>=4	2197		
14		2	4		2<4	-	4>=4	2744		
15		3	3		3<4	-	3>=4 X			
		4			4<4 X					
15	5	1	5	5<=5	1<5	—	5>=5			225
		2	4		2<5	-	4>=5 X			
		3			3<5	-				
		4			4<5	-				
		5			5<5 X					
	6			6<=5 X						