Practice Problem Set 4

1. Write a C program that prints the divisors of numbers: `1` - `n`.

   Examples

Input	Output
6	Divisors of 1: 1 Divisors of 2: 1 2 Divisors of 3: 1 3 Divisors of 4: 1 2 4 Divisors of 5: 1 5 Divisors of 6: 1 2 3 6

2. Write a C program that prints composite numbers from `1` – `n`.

   A number is called composite if it has a divisor other than `1` and `n` itself.

   Examples

Input	Output
6	1: Not Composite 2: Not Composite 3: Not Composite 4: Composite 5: Not Composite 6: Composite

3. Write a C program that prints the factorials of numbers: `1` - `n`.

   Examples

Input	Output
6	Factorial of 1 =1 Factorial of 2 = 2 Factorial of 3 = 6 Factorial of 4 = 24 Factorial of 5 = 120 Factorial of 6 = 720

4. Write a C program that prints the following pattern.

   Examples

Input	Output
5	5 4 3 2 1 5 4 3 2 5 4 3 5 4 5

5. Write a C program that prints the following pattern.

   Examples

Input	Output
5	* *** ***** ******* *********

6. Write a C program that prints the following pattern.

   Examples

Input	Output
7	1 1 0

	1 0 1
	1 0 1 0
	1 0 1 0 1
	1 0 1 0 1 0
	1 0 1 0 1 0 1

7. Write a C program that that prints the following pattern.
   Examples

Input	Output
7	0000000
	0100000
	0020000
	0003000
	0000400
	0000050
	0000006

8. Write a C program that prints the following pattern.
   Examples

Input	Output
4	1
	2 3
	4 5 6
	7 8 9 10

9. Write a C program that finds the summation of the following series for input n.

$$1 + (1+2) + (1+2+3) + (1+2+3+4) + … … … + (1+2+3+…+n)$$

Examples

Input
5
Output
35

10. Write a C program that finds the summation of the following series for input n.

$$1 + (1*2) + (1*2*3) + (1*2*3*4) + … … … + (1*2*3* … *n)$$

Examples

Input
5
Output
153

11. Write a C program that finds the multiplication of the following series for input n.

$$1 * (1+2) * (1+2+3) * (1+2+3+4) * … … … * (1+2+3+ … +n)$$

Examples

Input
5
Output
2700