# Practice Problem Set 6

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 |

1. 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 |

1. 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 |

1. 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 |

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

Examples

|  |  |
| --- | --- |
| Input | Output |
| 5 | \*  \*\*\*  \*\*\*\*\*  \*\*\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\* |

1. 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 |

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

|  |  |
| --- | --- |
| Input | Output |
| 7 | 0000000  0100000  0020000  0003000  0000400  0000050  0000006 |

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

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

1. 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 |

1. 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 |

1. 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 |