Test-1 (Set-A)

1. A number is called a perfect number, if the number is equal to the sum of all its positive divisors except the number itself. For example, (6 = 1 + 2 + 3, 28 = 1 + 2 + 4 + 7 + 14). Read an integer number, say N from the keyboard and print all the perfect numbers less than or equal to N.

[Time: 30 minutes] [25]

#	INPUT	OUTPUT
1	1	Invalid Input
2	300	6 28
3	-100	Invalid input
4	500	6 28 496

2. Write a program that prints out a pattern based on the user input (Assume input is in the range [2 , 10])

[Time: 40 minutes] [30]

#	INPUT	OUTPUT
1	3	1 2 3 4 5 6
2	4	1 2 3 4 5 6 7 8 9 10
3	5	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
4	6	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

3. Write a C program that takes three coordinates as input.
Next, it checks if the triangle is acute-angled, right-angled, or obtuse-angled.
Your code should do the following: -
First compute the lengths of three sides of the triangle;
Check whether the input satisfies the triangle inequality property,
i.e., max side length is less than the sum of the other two sides
do necessary checking and print the type of the triangle in the terminal.

[Time: 50 minutes] [45]

#	INPUT	OUTPUT
1	(1,2),(3,4),(5,6)	Invalid
2	(1,2),(3,4),(10,2)	Obtuse Angled
3	(0,1),(1,0),(0,0)	Right Angled
4	(56,23),(99,65),(35,69)	Acute Angled

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